

Manufacturers Record

Exponent of America

DECEMBER 2, 1920

Volume LXXVIII

Table of Contents

Number 23

"Hold On Like Grim Death".....Cover Page

EDITORIALS 117 - 129

Let the War Finance Board Function as Congress Ordered.

"Hold On Like Grim Death": An English Cotton Manufacturer's Advice to Southern Cotton Growers.

"Watchman, What of the Night? The Watchman Said, The Morning Cometh."—Isalah.

The South Is Putting On Its Armor.

Let the Tax Policy Be Reasonable and Moderate.

The Internationalists Are for Free Trade.

Is It Immoral to Force Firms to Pay Taxes on Profits That Do Not Exist?

Now Is the Time to Undertake Public Improvements. A Solemn Referendum.

A Lesson from Railway Management in Spain.

"No Such Power in the World Was Ever Before Contemplated As Is Now Concentrated in the Federal Reserve Board."

Germany's War After the War.

Futile Effort to Show that There Is No Credit Stringency.

Want War Finance Corporation Revived to Relieve Distressed Farm Products.

The Challenge of the Alien.

NEWS ARTICLES

Sharp Difference Between Inflation and Expansion of Credit for Production Purposes..... 130
By United States Senator Robert L. Owen

Deflation and Depression as Viewed by London Financial Authority..... 130

Southern Tariff Association Completes Organization..... 131

Low Prices, Unemployment and Business Depression the Natural Outcome of Forced Deflation..... 132
By Richard H. Edmonds

Acid Plant Nears Completion at Baltimore..... 133

Millions for the South Through Sweet Potato Crop..... By H. E. Horton 134

Two Large Paper Mills Under Construction Will Use Bagasse and Rice Straw in Making Finished Products..... 136

Commercial Apple Orchards on Large Scale Declared Feasible for East Tennessee Section..... 137
By Carlos C. Campbell

Why I Am Opposed to the League of Nations..... By Rev. W. O. Carver, D.D. 139

The Homely Wisdom of Fuller E. Callaway..... By Helen Christine Bennett 141

\$1,500,000 Office Building to Be Erected by Standard Oil Co..... 144

European Notes: Political and Economic..... By Edwin C. Eckel 145

Southern Industrial Activities for November..... 146

Mineral Development of Spain and Its Relation to America..... By Courtenay De Kalb 147

Georgians Will Preach Industrial Awakening..... 151

United States Chamber of Commerce Opposes National Railroad Boards of Labor Adjustment..... 152

Large Window Glass Merger..... 153

Will an Important Oil Field Be Developed in Arkansas?..... 157

New Production in Texas Oil Fields..... 184

DEPARTMENTS

The Iron and Steel Situation..... 154

Railroads..... 156

Lumber and Building Materials..... 158

Commendations, Kicks and Comments..... 160

Good Roads and Streets..... 161

Mechanical..... 164

Construction News..... 165

Industrial News..... 178

New Financial Corporations..... 180

New Securities..... 182

PUBLISHED EVERY THURSDAY BY THE

MANUFACTURERS RECORD PUBLISHING CO., BALTIMORE, MD.

Branch Offices: New York, 30 Church St.; Chicago, 11 South La Salle St.; Boston, 734 Old South Bldg.; St. Louis, 915 Olive St. Washington, Whaley-Eaton Service, 456-459 Munsey Building.

SUBSCRIPTION RATES

\$6.50 a year (in advance); six months, \$3.50; three months, \$2.00 to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. For Canada, add postage \$2 a year. For other foreign countries, add postage \$5.50 a year.

Back numbers, if available and not over one month old, 20 cents each. From one month to six months old, 50 cents each; over six months old, \$1 each.

In ordering change of address, give old as well as new address.

MEMBER ASSOCIATED BUSINESS PAPERS, INC., AND AUDIT BUREAU OF CIRCULATIONS.

NORTHROP LOOMS

Trade Mark Reg. U. S. Pat. Off.

Make better goods and
more of them with less
than half the labor cost
of weaving

Draper Corporation

Hopedale, Massachusetts



"HANDY ANDY"
Portable Adjustable Elevator
Dow Wire & Iron Works — INTELLE, KY.

Are Your Men On Time?

Stop Payroll Leaks with

Simplex Time Recorders

Low in Cost—Big in Efficiency

L. P. LATHEM

527 Candler Bldg.

ATLANTA, GA.

B. & B. WIRE ROPE

Safe and sound all the way
through. You can depend upon
it absolutely and always.

Broderick & Bascom Rope Co.
ST. LOUIS, MO.

Mfrs. of Celebrated Yellow
Strand Wire Rope



DUXBAK
Waterproof
Leather
Belting



Chas. F. Schieren Company
Tanners and
Belt Manufacture
ESTABLISHED 1868

26 FERRY ST., NEW YORK

Always Leads in Tests of
Quality, Endurance and Satisfactory Service

Black Diamond for Cutting

When you buy a file, you buy cutting service.
For extra cutting value, buy Black Diamonds.
Made since 1863 to a standard of file quality
that has won highest honors at expositions and
at the bench.

Two simple steps will lead to better filing
except where Black Diamonds are already used.
Our catalog is free for the asking. A shop
trial costs nothing and will show
convincing results.



Black Diamond File Works

G. & H. Barnett Company

Philadelphia, Pa.

1078 Frankford Ave.

Owned and Operated by Nicholson File Co.



NICHOLSON FILES

The Files that cut the Smoothest—
a File for every purpose.

Send for File Philosophy—a fifty years' Education in
Files and Filing in one hour.

NICHOLSON FILE CO.
Providence, Rhode Island, U. S. A.



KINNEAR ROLLING DOOR

Always Ready! Always on
the Job! Always doing its
work and doing it well!

The "Kinnear" is perfectly
balanced. It is in perfect
alignment in every way.
There is nothing that binds,
that sags or warps.

The Kinnear Door was the
pioneer in this field and has
maintained its leadership.

Our branch offices in prin-
cipal cities give personal
service. Write for informa-
tion.

**Always Ready
Always Easy**

THE KINNEAR MFG. CO.

823-873 Field Ave., Columbus, O.

New York Office: 1182 Broadway

Manufacturers Record

EXPONENT OF AMERICA

Devoted to the Upbuilding of the Nation Through the Development
of the South and Southwest as the Nation's Greatest Material Asset

Trade-Name Registered in the U. S. Patent Office

VOL. LXXVIII, No. 23
WEEKLY

BALTIMORE, DECEMBER 2, 1920

{ SINGLE COPIES, 20 CENTS.
\$6.50 A YEAR

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO.
Office: Manufacturers Record Building, Cor. Commerce and Water Sts.
BALTIMORE, MARYLAND

RICHARD H. EDMONDS, President VICTOR H. POWER, Treasurer
FRANK GOULD, Vice-President I. S. FIELD, Secretary
RICHARD H. EDMONDS, Editor

BRANCH OFFICES:

CHICAGO, 11 So. La Salle St. NEW YORK, 30 Church St.
ST. LOUIS, 915 Olive St. BOSTON, 734 Old South Bldg.
WASHINGTON (Whaley-Eaton Service), 456-459 Munsey Bldg.

SUBSCRIPTION RATES:

\$6.50 a year (in advance); six months, \$3.50; three months, \$2 to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. For Canada, add postage \$2 a year. For other foreign countries add postage \$5.50 a year. Back numbers, if available and not over one month old, 20 cents each. From one month to six months old, 50 cents each; over six months old, \$1 each. In ordering change of address, give old as well as new address.

[Entered at the Baltimore Postoffice as second-class matter.]

In order to avoid delays all correspondence pertaining to news or advertising matters should be addressed directly to the Manufacturers Record, Baltimore, Md., and not to individual editors, officers, employees or any branch office.

LET THE WAR FINANCE BOARD FUNCTION AS CONGRESS ORDERED.

THE agricultural interests are not asking for advances of funds from the Federal Treasury. They are asking that the War Finance Corporation be permitted to function as Congress authorized. Congress visioned in advance the present situation. It provided that the War Finance Corporation should have the use of \$1,000,000,000 with which to assist in financing export trade. The money would be advanced on proper securities, and every dollar employed would represent a legitimate transaction in the commercial world. Conditions are not normal. The Interstate Commerce Commission has been steadily employing extraordinary devices to aid the railroads during the period of transition. For months the British Government has been assisting in the financing of foreign trade. There is nothing novel about the use of the War Finance Corporation for a similar purpose in America. The war is still technically on. The abnormal conditions which are bankrupting farmers are the direct result of the war—almost part of the war. It is good national policy when reputable foreigners, vouched for by their banks and Governments, want to buy our cotton and wheat on easy credit terms to let them do so, even if the Government does have to assist temporarily in the financing. It was not many months ago that city papers were crying that the Government would lose \$1,000,000,000 by its guarantee of wheat prices. It never lost a five-cent piece, but accumulated a profit of about \$50,000,000. There is no more merit in the contention that Secretary Houston is right in refusing to let the War Finance Corporation function. There may be some who imagine that it is a good thing to let the farmers suffer, but this country will pay and pay high in the years to come for the losses agriculture is now enduring.

"HOLD ON LIKE GRIM DEATH": AN ENGLISH COTTON MANUFACTURER'S ADVICE TO SOUTHERN COTTON GROWERS.

SOME weeks ago we mailed to every cotton mill in America and to leading mills in Europe a pamphlet entitled, "A Plea for the Cotton Growers of the South," in which are set forth some facts in regard to the cost of cotton-raising and to the economic slavery in which the South lived for many years by reason of the low price for cotton. T. Haythornthwaite & Sons, Ltd., English cotton manufacturers of Burnley, writing under date of November 8 to the MANUFACTURERS RECORD, say:

"We have received your booklet entitled, 'A Plea for the Cotton Growers of the South,' dated September 9, 1920, and our Mr. W. Haythornthwaite has read it through several times with very great interest.

"The statement which you make and the information given is something entirely new so far as Lancashire cotton-cloth manufacturers are concerned.

"We have felt, like yourselves, the disability obtaining when buyers persistently hold off, and we have found that whenever the price of cotton shows a consistent rise from a low level to a high level the buyers of cotton and all the various kinds of textile goods from all over the world become very anxious to secure their season's supplies.

"We can quite believe that the price of cotton shows a loss to the grower, and we are of the opinion that trade will not revive until the raw cotton begins to lift its head from the present very low levels.

"We are of the opinion that all the markets of the world require cotton goods in very large quantities, and we also believe they will not purchase until a rising market is in operation.

"Our experience has always shown that to have a large volume of trade, confidence in the stability of prices must obtain.

"In February of this year cotton was quoted in Liverpool at 28.40d; today the quotation is 14.50d, and in view of the rate of exchange the price we consider is very cheap.

"The solution to the whole position rests with your people as to their ability to hold the goods (cotton). Our advice is, 'hold on like grim death.'

"Will you please forward us the average cost of growing cotton at your convenience?"

Here is an admission by one of the important cotton manufacturing concerns of England that it has been heretofore

wholly ignorant in regard to the question of the cost of cotton-growing in the South and the conditions under which the farmers of this section have had to live during the last 50 years by reason of the poverty prices of cotton. They take the very proper view of the situation that on a falling market people will not buy cotton goods, and that though the markets of the world need vast quantities of cotton goods, they will not be purchased until there is a rising market.

This is true as to all things. People will not buy on a falling market, because they ever want to find the bottom. It is only on a rising market that there is prosperity, and until the rising market takes place in farm products there can be no general prosperity among the farmers and workers of the whole nation.

The advice of this English cotton manufacturing firm is unlike any that we have ever received from cotton manufacturers in this or any other country, for they advise that the cotton growers of the South "hold on" to cotton "like grim death," taking the ground that "the solution of the whole position rests with the cotton growers as to their ability to hold the goods" (cotton).

Sir Charles W. Macara, one of the leading cotton manufacturers of England, in a recent article in the London Financial Times, which he sends us, advises that people "stop talking slump." In his letter to the Times he says:

"Almost incalculable damage is being done to industry and trade by uninformed articles in the popular press to the effect that a great slump in prices is inevitable. This is really contrary to present facts, as may be seen by comparing prices now ruling with those of three or six months ago; it is still more decisively contrary to the conclusions which an analysis of the world situation of industry will yield.

"I do not deny that some movement downward has taken place here and there. I do, however, deny that any fall of a general character has occurred or that any could occur without serious loss to the traders. In this article I shall speak especially of the cotton industry, but what I shall say applies in large measure to other industries.

"During the post-war period the cotton trade has suffered very greatly from inexperienced men writing about it. First the press 'wrote up' the 'boom' and now it 'writes up' the so-called slump. In both cases it has proved bad for the industry. What was called the boom was nothing more than a readjustment of the industry to post-war values. Machinery had advanced 350 to 400 per cent over the pre-war price—if you could get it at all. Consequently, it would have been impossible to replace any existing mill at less than four or five times its pre-war value, and there was doubt whether you could get new machinery without several years' delay, so busy were all the textile machinists. This state of things, by the way, still exists. In these circumstances it was obvious that values had totally changed and the industry had to be recapitalized to bring it into a correct relation with actual post-war prices.

"People who knew nothing of Lancashire mill finance were misled. They saw stories of enormous gains to shareholders in cotton mills, but what they did not see was that the share capital in a concern was often only about one-eighth of the whole. The holders of share capital, had the mills failed, would have lost all; but as they had succeeded, the shareholders got good returns. The other seven-eighths of the capital, being loan capital at a fixed rate of interest, did not benefit.

"From these facts, I think, it is evident that had the proceeds of the 'boom' been spread over the whole of the capital involved there would have been only a modest yield.

"Now we come to the so-called 'slump.' Here is a great danger. Cotton in the raw material form has undergone all sorts of fluctuations, and the falls of price have been conspicuously recorded, while subsequently heavy increases have not been given prominence to the same degree. The result is that the public have no sense of the real position. Actually we shall, if we do not handle the situation carefully, be faced with a repetition of what occurred in 1914 on the outbreak of war, when midling American, the basis of the market quotations, fell from 7½d. per pound to 4d., the American planters being landed in a

loss estimated at ninety millions. Very drastic steps were then taken on my advice or the loss would have been greater. At the moment that variety of raw cotton is at 8d. in America, but owing to the exchange and other factors it stands considerably higher here. Eightpence a pound is clearly worse than 4d. pre-war, and the grower cannot afford to grow cotton to sell at that price. Hence there is a danger that he will put his land to other uses.

"The cotton spinner and manufacturer can spin and weave cotton only, but the grower can put his land to a dozen uses. Is he likely to go on growing cotton if it involves him in loss? Therefore, the present values can only be temporary. If they were to persist, it would mean great drawbacks to American growing and would seriously injure our own great empire cotton-growing schemes and those in the colonies of other nations.

"Having shown that the low prices of the raw material are in themselves a danger while they are below cost of production, let me now point out how small is their influence on manufactured cotton goods. In the first place, no reduction in the cost of raw material which is subsequently overtaken by an advance is worth taking into account, and hence the movements of the markets over a long period have to be estimated. But, assuming that values of raw material were to remain low, an immediate effect on prices of manufactured goods is out of the question, since raw cotton bought now for the finer varieties of manufacture must take 12 months or more in passing through the various processes.

"Furthermore, the raw material is only one factor in the ultimate cost of the manufactured goods. In the finer qualities of fabrics the raw material is a relatively small factor. All the other factors—wages, coal, transport, etc.—have gone on increasing in value. Since the raw cotton was bought to make the goods now in the warehouses a 30 per cent advance of wages in all the many processes of cotton manufacture has taken place, and coal prices and other charges have gone up. No fall in the raw material can compensate for these advances, nor is it possible for there to be a slump in the goods into which so much expensive service has been put.

"Evidently, then, it is a mistake to 'write up' a slump; it is also very bad policy. English newspapers go all over the world, and our cotton customers in other countries see these statements, and either hold off ordering or seek to cancel orders. If orders are cancelled, it means damage to British firms who themselves, in the cotton trade, keep pace in their payments with the delivery of the goods—a thing they can only do when their customers abide by their arrangements. We must stop talking slump; the world wants our goods and will pay a fair price if they are led to see what the fair price is.

"I would, therefore, appeal for a consideration of all the factors of the situation which show that no slump can possibly take place unless it be artificially produced."

Let English buyers take the lead in bidding a fair price for the South's cotton, and everybody will soon become optimists and no more will be heard of a "slump." The English manufacturers should take the lead, and in the meantime the South should "hold on like grim death."

DIDN'T STUDY SITUATION.

"WE all knew that war conditions could not last forever, but the suddenness with which the change came was not anticipated. It is amazing and surprising, and the iron trade is more or less staggered by being confronted unexpectedly with conditions so entirely and absolutely the reverse of the conditions which prevailed for the past four years."—Matthew Addy Co.'s iron circular.

The change should not have surprised anyone, for as the MANUFACTURERS RECORD has pointed out every week since last January, this depression was inevitable if the Federal Reserve Board continued its policy. No reader of the MANUFACTURERS RECORD should have been caught unaware.

BOLSHEVISM.

BOLSHEVISM is no money, no marriage, no religion, no honesty and no restraint. It is the negation of everything except anarchy.

"WATCHMAN, WHAT OF THE NIGHT? THE WATCHMAN SAID, THE MORNING COMETH."—Isaiah

The whole country is asking, What of the night? and rightly so, for the night of business is dark and the clouds lower heavily. Men everywhere are oppressed with the mighty damage the storm has wrought. The lightning still shivers the trees and the thunder rolls ominously. But the watchman sees that the morning cometh. He sees that the clouds are growing thinner, the lightning strikes less fiercely, and faintly he visions a sign that the storm is passing. It has done damage, immense damage; it has swept mighty trees away; it has flooded the lowlands and made some homeless, but it has now done its worst. Its fury is over.

Soon the sun begins to break through the clouds, man reasserts his dominion and promptly starts afresh on his work. He replows, he replants, he builds stronger dams, he moves to higher grounds and goes forward to larger things. He forgets the terror of the storm, his nerves regain their calm, his muscles become firm, his backbone stiffens and he conquers all difficulties.

That is the story of business. It has faced the storm, it has been beaten down for a while, but it will soon arise and move upward to higher ground. The clouds are passing, the sun begins to shine, and the watchman sings aloud to the farmer and the merchant, the manufacturer and the day laborer, "The Morning Cometh!"

The South Is Putting on Its Armor

THE terrific and successful assault on cotton prices, disastrous as are its consequences, may yet have in it the seed of a future and permanent prosperity for the South that will be worth some the pain and travail that have been caused.

The crisis is going to compel a closer drawing together of the commercial strength of the South. It is going to mean the co-ordination of financial power and the upbuilding of organizations equipped in resources and in information to withstand the challenge of conflicting and antagonistic interests.

It is going to compel, also, the creation of adequate marketing facilities, the absence of which, however unavoidable, has occasioned terrific losses. The Federal Warehouse Act, when strengthened by the supplementary legislation Mr. Asbury F. Lever, now of the Farm Loan Board, has in mind, offers the opportunity for systematic warehousing on a great scale, and the necessity for it has been made so apparent that success is assured. In deed, the records seem to show that

there has never been so much progress toward warehousing in any previous year as in the twelve-month coming to a close.

Orderly marketing is definitely in sight and it will save the South millions of dollars annually. It will also take some of the uncertainty out of cotton-production and bring about a reasonable stabilization of price.

But more important even than these details is the fact that the calamity of this year is compelling the South to re-examine its whole economic status and consider de novo its underlying policies. This means discussion and argument, and in a fair forum it will be established in theory, as the next Administration will establish it in practice, that the doctrine of free trade is ruinous, and more ruinous to the South than to any other section.

The demand for protection is becoming so insistent in the South that free traders are rushing copy to their local newspapers in an attempt to support the old economic fallacy that free trade is a benefit. It is the doctrine of despair. If it be true that cotton production can be maintained in the South only if the cost of that production is kept on a level with costs

in India, then the South is condemned forever to be a territory cursed with serf labor, with standards of living comparable to those existing in the cheap nations of the earth.

The whirl of events, fortunately, is vetoing such a condition. We have built up in this country great industrial institutions. They have a constant demand for labor and they can pay that labor a high price. The factory is the competitor of the farm. The cost of farm labor, the war showed, is fixed by the rate the city can bid. There is the constant lure of the factory wage. On the one side, therefore, the Southern farmer is confronted with a wage competition that he must meet. He cannot avoid it.

On the other hand, taking cotton as the finished product, the Southern producer enters a market where his chief competitors produce under the cheapest labor conditions known. To meet that competition the Southern farm must also have cheap labor. The producer, therefore, is engaged in a constant struggle to pay his labor the lowest possible wage, and yet even the highest wage he can pay is overtopped by the factory offer. There is but one way out of such a dilemma—a higher price for the farm product. If that cannot be obtained, then the production of cotton ceases to be a feasible industry in the United States, and the same is true of other farm products which meet pauper labor competition. It is a question of getting higher prices or of agriculture sinking into decadence.

This is exactly what happened in England. Native agriculture could not exist under free trade conditions, so it was English policy to let native agriculture die. The war showed the folly of it. It is the Lloyd George program now to revive British agriculture, and this is going to be done even if it has to be subsidized. The British have learned that the capacity to feed themselves is as important in war as the possession of guns and armament. Moreover, of course, the British have been free traders only at home. The great self-governing colonies, such as Australia and Canada, have had protection. The British are quite willing to have one policy in one part of the world and another in another, according to the economic facts.

It is idle to argue, as Mr. B. F. McLeod does in the Charleston (S. C.) News and Courier, that "a high protective tariff means low-price farm products in any country whose farm products are in excess of domestic consumption." It is idle, in the first place, because we are importing more than half a billion dollars' worth of foodstuffs every year, including corn and wheat, and we are even importing cotton in volume. Consumption is rapidly catching up with production in America, so far as farm products are concerned. We still produce a surplus, but we are headed away from it. It is just there, by the creation of great home markets through the growth of industrialism, that protection is indirectly of such great benefit to farmers. Once virtually our only farm-product markets were abroad. That has been changed.

In the second place, it is not true that a high protective tariff means low farm prices under the conditions named. Mr. McLeod is one of the most earnest and intelligent of the men who have given so much of their time and attention to the American Cotton Association and the plan for acreage reduction. But so rapidly are American spindles catching up with American production that any great cut in acreage would produce a situation, even in cotton, where there would be no exportable surplus. It is only a question of time before American mills will use the entire American cotton crop, and protection will hasten the coming of that time.

Extreme recessions in cotton prices have been during

periods of low tariffs. But the South has never obtained the maximum benefit from high tariffs, because it has adhered to the pernicious doctrine of free raw materials. It is obvious, of course, that if everything except agricultural products is protected, the discrimination will be felt. But what Senator Harding and the modern Southern economists propose is the extension of protection to cover agricultural production as fully as it covers manufactures.

There is only so much cotton in the world each year. Assuming that European mills would prefer to buy lower-priced Indian cotton, they would have to cease operations or turn later to the available American surplus. Nor is it apparent that fair prices would do more to encourage increased production abroad than acreage reduction would do. The inability of England to get any cotton at all would make her be more energetic in developing new cotton areas than would the fact that she had to pay a little higher price for American than for Indian cotton. Moreover, what Mr. McLeod is trying to do through acreage reduction is to force prices up and yet he dreads high prices for fear they will induce Europe to supply her own needs.

It is not true that trade should always be allowed to follow the line of least resistance. It is an old fallacy and assumes that economic barriers are in themselves bad. It is restraint and guidance that make a child a man of sturdy character; restraint and direction likewise give robustness to trade. Trade is a thing to be governed by the intelligence of man, and that is why we have "business" men. It has been disastrous to the South to follow the belief that her crops must be marketed haphazard, and that intelligence and planning need not be utilized in the creation of markets and the protection of prices.

Cotton, moreover, is not the only Southern crop. If protection will assure fair prices for tobacco and peanuts and other staple crops—and it is not denied that it will—it will be worth while for the Southern farmer to secure those good prices, even if he has to make cotton a side crop, a low price for which would not ruin him.

Fortunately, the South is likely to get a taste of real protection during the next four years. Practice will show whether free trade or protection is preferable. The farmer will be able to make his own comparisons, in dollars and cents, and need not worry himself about theories. He knows already that while the war kept imports out he got the highest prices for his crops he ever knew. He knows that since the ports have been surfeited with imports, the prices for his crops have more than been cut in half. There are other influences at work, of course, but these big basic facts attract his attention and he cannot avoid basing his conclusions thereon.

No Southern farmer need be in the least alarmed over the prediction of free traders that a protective tariff is going to ruin him. Most of the great farm organizations are demanding protection now, in a loud voice. They do not fear it, they want it. That is because they are wise. Let the Southern farmer be assured that instead of the threatened ruin, a period of real prosperity will result from a protective tariff, to his particular benefit. There is ahead of him, as President Wilson once said, "a feast of good things" because his interests are to be considered in preference to those of the Sepoys and the Hottentots, the Malays and the Orientals. Within the decade the most stalwart protectionists in the United States will be found in the Southern States. The American market is the most valuable in the world and it belongs of right to American producers.

Organization and protection will save the South from a repetition of such a horrible autumn as this has been.

Let the Tax Policy Be Reasonable and Moderate

BETWEEN now and May, 1923, there will become payable about seven and a half billions of Government obligations, of which about four and one-quarter billions are represented by Victory Notes. The Secretary of the Treasury urges that "the receipts from taxes and salvage be kept sufficiently high, not only to meet current bills, including interest and sinking fund charges, but also to retire the floating indebtedness and a considerable part of the Victory Notes before the close of the fiscal year 1923."

What Secretary Houston plans and recommends is substantially as follows:

1. Reduction of the floating debt to less than two billions by July 1, 1921.
2. Payment of this entire floating debt by July 1, 1922.
3. Acceptance of Victory Notes in payment of income and profits taxes after July 1, 1922, which, with the sinking fund, would make the Victory Notes stand at maturity at about three billions.

The foregoing means that in the two and a half years until May, 1923, it is proposed that the Treasury pay up:

Floating debt.....	\$2,347,000,000
War Savings certificates.....	800,000,000
Victory Notes.....	1,250,000,000
Total	\$4,397,000,000

The possibility of carrying out the program is based on the maintenance of tax receipts at not less than four billions a year.

There is owed to us by foreign nations approximately \$10,000,000,000. No provision for a sinking fund to cover it has been made. The debt is in the form of demand notes, and they are supposed to bear interest at the rate of 5 per cent. Interest is not now being collected. The Secretary of the Treasury is authorized to fund these demand notes into long-term securities.

It was reported by cable on November 9, that Germany has delivered to the Reparations Commission interest-bearing bonds of fixed maturity to the amount of 60,000,000,000 gold marks, worth at normal exchange approximately \$15,000,000,000. The bonds are negotiable and subject to sale in the world markets. The Harriman National Bank very properly points out that these bonds furnish the Allies with the means whereby to pay interest on their debt to the United States. The interest would amount to about \$500,000,000 annually, or one-eighth of the Houston estimate of Government expenses per year. Moreover, the effect would be to reduce our own national debt to a liability of less than \$15,000,000,000.

A 12,000,000-bale crop of cotton, at the approximate present value of \$75 a bale, would be worth \$900,000,000. An 800,000,000-bushel wheat crop, at \$1.70 a bushel, would be worth \$1,360,000,000. A 3,000,000,000-bushel corn crop, at \$.75 a bushel, would be worth \$2,225,000,000. The combined worth of the three great staple American crops, allowing for the most bounteous production, would be \$4,485,000,000.

To raise \$4,000,000,000 in revenue in a single year, therefore, means the equivalent of confiscation of the entire corn, wheat and cotton crops each year for the maintenance of the Government. Until the Government forced such radical price reductions, half the value of these three combined crops would have paid all expenses. A \$4,000,000,000 budget, therefore, on the present price scale, means doubling the tax levy in terms of the principal commodities. As a matter of fact, the combined worth of less bounteous crops last year was \$24,000,000,000 dollars, and this year it will be less than \$18,000,000,000. The price drop, therefore, has caused a loss greater than the entire cost of government.

This nation cannot afford to pay in taxes each year approximately one-fourth of the total gross value of all the agricultural production. It is beyond the endurance of the people. We consider it folly to talk about the advisability of reducing taxes. It is not a question of advisability, but of necessity. The only issue involved is how to do it, not whether to do it.

Secretary Houston's program apparently does not go so far as to make provision for taking care of the \$3,000,000,000 in Victory Notes which, even under his rigorous scheme for debt payments, will be uncared for in May, 1923. We assume that no sensible financiers would even consider carrying them along as floating debt, since floating debt is invariably a terrific drain on a nation, as it is on an individual.

There must be taken into consideration, also, that the Treasury is purchasing Liberty Bonds below par in the open market, borrowing funds at a high rate of interest wherewith to retire long-term securities bearing a low rate of interest. No justification of this course has yet appeared, and none can be found. We have formerly characterized the immorality, also, of the Government repudiating its commitments as to Liberty bonds and taking advantage of that repudiation to purchase its own securities far below par.

Reduction of taxation should have preceded deflation. The opposite course has been pursued, and certainly no financier or statesman will undertake now to advance the proposition that the assault on prices ought not be reflected in the cost of governmental administration. If prices generally have been cut 25 per cent, this ought automatically to connote a decided decrease in the cost of administering public affairs. The people are tired of being told to make sacrifices and submit to ruin for the general good. If terrible sacrifices are necessary—and they are not—the Government ought to set the example by shouldering its share. The carnival of expenditure by Governments, with grafters getting a good part of the money, has been the chief cause of inflation in the world. It has been, in a big way, the only inflation in America, for, as Senator Owen so plainly shows elsewhere in this issue, a growth in credit extension is not inflation if there is a corresponding increase in production. It is the Government only that has spent without producing new wealth.

We have entire confidence that the new Congress—the "protest Congress"—will not be in any doubt at all from the day of its opening as to the adoption of a fiscal program with heart in it and not devised to put the American people on a bread-and-water diet for years to come. The program should, and probably will, include:

1. Funding of the Liberty bond and Victory note issues into long-term securities, with privileges designed to bring them back to par.
2. Payment of interest by foreign nations on debts due.
3. Drastic cuts in administrative expenses.
4. A tariff high enough to provide revenue and at the same time protect American industries.

Men talk about the honor of the nation in this or that respect, but the honor of the nation is more immediately involved in the carrying out of pledges made in regard to its bonds than in any other respect whatever. The sale of these bonds below par is a humiliation and a shame to all Americans. It would be pardonable if essential, excusable if some dire necessity had dried up the credit sources; but the stupendous wealth of the nation precludes even the possibility of the issues being tainted, and they are below par only because they are permitted to be below par. Senator Harding has more than once intimated that he will do something to solve this situation, to vindicate the honor of the nation at

home. On moral grounds alone, therefore, a funding of the debt is requisite. It is imperative economically, because it is sheer madness to compel the present generation, which has given already so largely of blood and treasure, to shoulder an unfair proportion of the war cost. The war was fought for the benefit of all succeeding generations and they must help to pay for it. There are men who, in the pride of strength, want to make an exhibit of the marvellous debt-paying capacity of the nation, but the spectacle would not be worth the price. Part of the Napoleonic war debt has not yet been discharged by England. Why should we discipline ourselves and contract our normal growth and penalize progress solely for the satisfaction of saying that we paid our debts long before payment was required?

Irrespective of the German indemnities, there is no good reason why interest on Europe's debt to us should not be paid. Both England and France, wisely or unwisely, are finding millions with which to build up armament and carry on magnificent colonization schemes. It has been boasted in London that British oil developments alone will yield profits sufficient to pay the entire war cost. France had billions in perfectly good securities invested abroad. They do not want to repudiate their legitimate obligations. The careless way in which our own Treasury officials talk of postponement of the war-debt interest, in contrast with their vehement protests against any and all proposals tending to relieve domestic agricultural conditions by facilitating the financing of exports, has created a very bad impression and even a feeling of resentment in the minds of taxpayers. They feel that they are being made the goat.

The greater part of Government expense—at least 85 per cent—is for fixed charges and army and navy. More gradual repayment of the debt, as outlined, would cut deeply into the 85 per cent, and on the other 15 per cent there can reasonably be expected a reduction that keeps pace with the lowered cost of living and economical administration. Fifteen per cent of \$4,000,000,000 is \$600,000,000, which is about the total amount that it cost to run the whole Government a few years ago. The saving of one-fourth of it, or \$150,000,000, would be very much worth while.

We are touching elsewhere in this issue on the tariff question. It may be that estimates of a billion a year, to be collected from the customs houses, is excessive, although the statistics do not show so. A great deal depends on the total revenue it is finally decided to raise. The argument appears to be convincing that at least one-fourth of the total tax levy should come from customs. If the total levy can be kept, as it ought to be, within \$3,500,000,000, about \$900,000,000 should and can be collected at the ports. It is not simply a question of revenue, but is even more a question of meeting the situation created by the greatest inpouring of foreign goods ever known. People cannot pay taxes unless they have incomes.

The fiscal policy to be adopted by the next Congress will be a major factor in national prosperity for years to come. A decision to penalize the country by forcing it to economize by being non-progressive, that would turn new capital and wealth into the unproductive federal fisc instead of into the channels of productive industry, would be fatal. It has never been the American habit to acquire independence financially by hoarding, but by increasing efficiency and, therefore, income. Americans have never buried their talents, but have put them to work. It is by the expansion of industry and the resulting increase in income that the debt can be made to look paltry and be paid with comparatively little difficulty. The debt, in fact, may become a great national asset if wisely used as an instrument for expanding credit in aid of productive enterprise.

The gentlemen who have been summoned in the national referendum to assume responsibility for affairs—it was an

all-American, not a mere party victory—may safely be trusted to bear this aspect of the situation in mind, and we have no doubt whatever that a practical solution of the tax problem will be found. That means it will be a humane solution, and not the stern, relentless, disciplinary and penalizing program Secretary Houston appears to contemplate.

THE INTERNATIONALISTS ARE FOR FREE TRADE.

THERE is a powerful movement afoot to make it appear that we can only collect the foreign debt by agreeing to throw the American market open to the world, tear down the customs houses and make this the universal dumping ground.

There is, in Europe, the accumulated wealth of centuries. Europe holds vast investments abroad. The \$10,000,000,000 which she owes us is not a staggering debt. It represents, for instance, but a part of what the Allies rightly contend Germany alone can pay to them in the form of indemnities. She has already given her gold bonds as indemnity to the amount of the equivalent of \$15,000,000,000. Europe can pay us, just as we paid Europe after the Civil War. There are plenty of Americans willing to take her public utility and other securities in payment. We cannot, in any case, help to restore and upbuild Europe, without taking a financial interest in the things restored or created.

Senator Curtis has been severely attacked because he intimated that possibly a billion can be collected in import duties. His answer is: "The imports amount to over \$5,000,000,000, and the duties collected to over \$300,000,000. Under tariffs fixed in Republican measures in times of peace, the amount collected on imports averaged 18 per cent. If same duties were restored, our revenues would equal \$1,000,000,000."

The total interest at 5 per cent on the debt of Europe to the United States would amount to a little less than \$500,000,000. The idea that we must admit, under extremely low duties, ten or more times that amount in order to collect interest is extravagant, even allowing for normal trade exchange.

High protective tariffs will be essential in the United States so long as we maintain a standard of living for our workmen and others higher than exists anywhere else in the world. We can have low tariffs and drift backward, or we can have tariffs that will accurately measure the difference in cost of standards of living, or production, and go forward.

Senator Harding is committed definitely to a protective tariff, not only by pronouncements during the campaign, but by a lifetime of study which has convinced him of the economic soundness of the protective principle. Whether one billion dollars or three-quarters of a billion is the proper amount to collect at the ports will be decided by a survey of the facts which are now being collected, but it is going to be an amount sufficient to give protection as well as to meet revenue requirements. One reason the nation repudiated the League of Nations was to get rid of exactly that sort of internationalism which is now crying for free trade.

Federal Reserve Policy Ruinous to Cotton Farmers.

W. W. CLARK, Secretary Burke County Chamber of Commerce, Waynesboro, Ga.—I would like to say for the MANUFACTURERS RECORD as a magazine, that I have only been reading it a short time and fully agree with you in regard to the Federal Reserve Banking System. Burke county is the largest cotton-producing county in the State, and the decrease in price of cotton has practically ruined the farmers and business men. We have the boll-weevil in this section, and cannot produce cotton with the present prices.

Is It Immoral to Force Firms to Pay Taxes on Profits That Do Not Exist?

ON behalf of a number of trade associations, speaking for some of the great basic industries of the country, there was on November 11 addressed to Joseph W. Fordney, Chairman of the Ways and Means Committee of the House of Representatives, the following communication:

"On behalf of the industries of the United States we respectfully urge that Congress immediately after it assembles in December next, make a slight amendment to the Income Tax Law which will afford relief from tax assessments for the year 1919. Sections 204, 214 and 234 of the law in question—relating to 'Deductions'—providing for such relief were restricted to the year 1918 and consequently Treasury officials have no authority to make revision of tax returns for the year 1919. But, as you are well aware, it was originally the intention of Congress to make provision for the very year in which readjustment of prices actually took place.

"As you probably know the reduction in prices started in a general readjustment move in the spring of 1920 and has continued up to the present time. Inventories for 1919, taken before this price-dropping started, were very high. Losses suffered thereafter through falling of prices were accordingly tremendous and in many cases more than offset earnings for the previous year. As a consequence heavy taxes have been and have to be paid on *paper profits* which have long since vanished. Indeed, such taxes were and will have to be paid not from *real income* but out of *capital assets* of commercial and industrial concerns.

"It is further pointed out that the relief suggested above has nothing to do with the program for a general revision of the national tax laws which will undoubtedly be deferred until after the new administration takes office.

"It has been suggested by high authorities on tax legislation that the most effective process for providing early relief is a joint resolution passed within a few days after the opening of Congress amending the three sections referred to above so as to extend the provisions of the act which granted relief for the year 1918 to the year 1919.

"Inasmuch as a number of firms have indicated their financial inability to meet the fourth installment of taxes which falls due on December 15 we respectfully urge that you take up with your committee the matter of holding a hearing on the subject in question before Congress convenes in December next."

Since the present Administration is responsible for fiscal policies, it was an open secret that no relief of the character outlined would be probable unless sanctioned by the Secretary of the Treasury. Mr. Roper, until recently head of the Bureau of Internal Revenue and the man under whom the vast war revenues were collected, after an intensive study of the situation, issued a public statement declaring that the proposed relief was entirely proper, was absolutely essential and ought, under the theory of the law, to be extended.

Many of the most expert Treasury officials in Washington stated privately but unequivocally that they would be only too glad to grant the relief sought if their hands were not tied by the limitation of law.

The succor proposed would be of the greatest value to innumerable firms. It would save some from bankruptcy. It had, indeed, been the original intention of Congress to make inventory adjustments applicable to any taxable year, as is the case in England.

The facts prove conclusively that many firms are being called on to pay a heavy tax on fictitious profits. The profits were on paper and price recessions have wiped them out. They cannot pay the tax out of profits which do not exist. They must dig into their capital for the funds, or borrow or default.

Seldom if ever has so strong a case been presented for

consideration and the relief sought seemed likely to be granted until the sinister figure of the man most responsible for the losses in inventories projected himself into the situation, with his usual stiff-necked opposition. Secretary of the Treasury Houston says that the Treasury is opposed to the suggested amendment and will collect the taxes.

This man's idea of finance is to drive everybody to the wall. No private miser, intent on collecting the last nickel, could be more savage in his demands. He is using the great authority resulting from his high position to put the power and might of the United States Government in motion against the best interests of citizens. No measure of relief that can be conceived, for industry or agriculture, but meets with his stern veto. It is the misfortune of those who seek this tax relief, and who ought to secure it as a right, that the one man more than all others responsible for the losses they have sustained should also be the man in whom there is vested at the moment the apparent power to deprive them of all help.

Secretary Houston has a debt-payment program, which we discuss elsewhere in this issue, which calls for a quicker liquidation of the debt than was ever contemplated. He is aware that the profits taxes to be collected in 1921 cannot possibly approach in value the estimates, and he is therefore anxious to gather into his tills the last dollar it is possible to get for the year 1919. His avidity to get rid of the floating debt can be commended, but not if it involves consequences to business that eventually will cost more than the immediate sums now involved. It is going business that must pay taxes in subsequent years, therefore it is wise to keep business going. It will not benefit the Treasury to have a number of firms go out of business and be thrown into the hands of receivers. It is not going to do the Treasury any good to collect profit taxes on losses.

The situation is so serious that Congress, despite the congestion, cannot afford to follow the recommendations of Secretary Houston. It may better follow the dictates of common sense and of other Treasury experts, the opinions of whom, although they are restrained from speaking publicly, are quite at variance with those of the Secretary, and are based, no doubt, on a broader and clearer view of the situation and the facts.

What is sought is a substitution in two sections of the Revenue Act so they will read "for any taxable year" instead of "for the taxable year 1918." An amendment to achieve this purpose was passed by the House last spring and would have passed the Senate but for congestion of the calendar. It is to be understood that the relief is not sought on general information. Statistical and documentary evidence showing the enormous inventory losses is available and would, of course, have to be authenticated to the Treasury officials before escape from taxes could be secured, even after the amendment of the act. There is no attempt to dodge just taxes or anything of the sort.

The election on November 2 was a mighty national protest against unfair practices in Washington. The Congress is Republican and it cannot afford to neglect a clear duty simply because the present Treasury head advises to the contrary. It is a case where Congress should go over the head of the Secretary of the Treasury and ignore his view. The time is short. The amendment, to afford maximum relief, should be passed the first week Congress is in session. Such quick action is difficult to get, but it can be got. It is possible. Let Congress vindicate its own sense of justice by breaking precedent to the extent of giving immediate attention to this so pressing and exigent a situation.

NOW IS THE TIME TO UNDERTAKE PUBLIC IMPROVEMENTS.

SINCE midsummer there has been a decided improvement in the market for municipal bonds. "Municipals," as they are termed in the securities market, include not only city bonds, but also the bonds of townships, counties and States, besides town and villages, road districts, drainage districts, etc. These are generally held in higher esteem than they were several months ago, and as an instance of how they have improved, the experience of Cumberland, Md., can be cited. In July, that city offered for sale an issue of \$250,000 of 5 per cent bonds, and it is stated the best offer that could then be obtained for them from any of the bond-buying firms was 88, and they were withdrawn. In October they were again offered and were disposed of at something better than 97, the purchasers being a syndicate of Baltimore bankers. Charlotte, N. C., also lately sold \$100,000 of 5½ per cent bonds on a 5.43 per cent basis, and Durham, in the same State, disposed of \$575,000 of 5½ per cent bonds on about a 5.47 per cent basis. These are but examples to show the trend of opinion regarding this class of securities and the improving outlook for them.

Municipal bonds are largely purchased by investors of the class who buy heavily, not so much by the smaller investors. Insurance companies, savings banks, big estates, and wealthy individuals find them attractive because of their tax exemption features as, with respect to the income tax, they do not even have to be reported. At present, although there has been a great improvement in the market for municipals, the attractiveness of many of the railroad issues which have lately been sold, constitutes strong competition in the minds of investors. One of these issues that was offered not long ago was that of \$25,000,000 of Canadian Northern Railroad 7 per cents guaranteed by the Government of Canada at par, and everyone of them was subscribed for before ten o'clock of the morning of the day on which they were offered. Moreover, some of these bonds were resold at an advance in the afternoon. Another large issue of equipment bonds put out by the Illinois Central Railroad did not even come upon the market but was disposed of privately.

Other instances of immediate success in floating railroad issues could be given, but these are sufficient to show the trend of the market and to make clear the necessity on the part of municipalities to meet the market in some degree. It is, of course, not necessary for municipals, because of their tax exemption, to bear rates of interest equal to those of railroad issues, but in some States of the South public bonds cannot be legally issued to bear more than 5 per cent interest and there is sometimes a provision that they cannot be sold at less than par. This, of course, in the present state of things, prevents disposal of them, although in the several southern instances mentioned it is shown that 5 per cents were sold at a comparatively small discount, and that 5½s were disposed of to even better advantage.

Criticism is heard of some Southern States for laws which prevent holders of their securities from obtaining collection of the principal by legal process should there be a failure to pay when the bonds mature. Other States in this section do not have such a law, and consequently their securities are held in greater esteem and find a readier market. In at least one of the States whose law is thus adversely criticized, there is a movement to alter the statute so that bondholders

will be accorded as full protection for the principal of their investment as in the other States to which allusion is made.

If, therefore, all Southern communities, either towns, cities, counties or States, will, when issuing bonds, follow the example of those States in this section which have sought to safeguard the interests of bondholders, and to also adjust rates of interest to meet money market conditions, taking into consideration the fact that these rates need be but proportionate—in view of the tax exemption quality mentioned—they will find the present time most encouraging to market their issues and to make provision to begin their spring campaigns of road construction, street paving, and other country, town and city improvements which are so much needed and desired everywhere to keep pace with general progress throughout the country. It may take weeks to prepare bonds for the market, and by the time that they are ready the market in all probability will be even better than it is now. Different factors are having their influence upon the situation from day to day, yet with all this the improvement in the demand for municipal bonds increases steadily.

A SOLEMN REFERENDUM.

THE election of Senator Harding by so overwhelming a majority can have but one interpretation. It is the 'solemn referendum' on the League of Nations for which President Wilson asked when he started his tour of the country in 1919.

"Governor Cox made the League question the great issue of his campaign. His stump speakers likewise fought the campaign strictly and squarely on the League as brought back to this country by President Wilson, with only 'such reservations as would clarify and protect American interests.'

"Forced by the aggressive attitude of the Democratic campaigners, the Republicans fought back on the League issue. They would have none of it, although they were willing to compromise on some sort of 'Association of Nations,' which many leading Republican newspapers candidly admitted would be almost impossible to form.

"Thus was the issue sharply drawn.

"Cox and the League.

"Harding and no League.

"The Democrats wanted it that way and the Republicans, partly against their will, were forced to make it the supreme issue.

"President Wilson has had his solemn referendum. The majority of the American people do not want the League of Nations in any form, whether 'clarified' or not. The warning of Washington to beware of entangling alliances has become too firmly imbedded in American minds for even so great a statesman as Woodrow Wilson and so great a campaigner as James M. Cox to be able to change it.

"It is true that the South stood solidly for Cox. But the League question was not the issue in the South, just as protective tariff has never been the issue. Here there is but one question and can be but one question until the Republican party breaks loose from the negro. The campaign in the South was fought on the color question, and on that question there can be but one decision.

"Had the negro been eliminated from the campaign in the South, it seems almost certain that the decision against the League here would have been as convincing as it was in the East and West and North.

"The question is answered.

"We will have no League."—Pensacola Journal.

The League would simply intensify the negro problem many fold. If the South had fully understood the dangers to the white race embodied in the League of Nations, it would have a hundred times preferred to vote a Republican ticket rather than run the risk of the race potentialities in the League of Nations, one of the most dangerous propositions ever submitted to the world. It is to be hoped that the Republican party will not commit its blunders of the past on the race issue, but that it will realize that the white race is and of necessity must be supreme. On this point we think Mr. Harding will be wiser than many of his predecessors.

A Lesson from Railway Management in Spain

THE manner in which Spain has just met a crisis in the needed rehabilitation of her railroad service is suggestive of methods that might have been applied advantageously elsewhere. The problem was to facilitate the restoration of the railroads to a normal condition, so as to meet the requirements of traffic without throwing a burden upon the general public by an outright bounty paid from the State Treasury. The example of the United States was cited as warrant for a law that would permit the railroad companies to increase freight and passenger rates to meet the costs of improvement of permanent way and equipment, and to satisfy the demands of the employes for higher wages.

It was pointed out that the circumstances were not dissimilar in the two countries. In the United States the railroads had been operated temporarily under Government control, while in Spain they had remained, during the war, in the possession of their owners, but in both cases they were under high pressure to move materials needed for the conduct of the war, and it was impossible to maintain the roads in a high state of efficiency. The result was general deterioration, resulting in subsequent inability to handle traffic promptly and economically.

Spain did not enter the war as a belligerent, but, so far as the Allies were concerned, her attitude was one of benevolent neutrality. Individual opposition and interference, inspired by German agents, which caused occasional friction, was not reflected in official quarters where the influences were distinctly friendly to France through the dominance, during a large part of the period, of the Count of Romanones, a staunch friend of the French Republic, and at another time of Eduardo Dato, more neutral in spirit, but never hostile to the powers at war with Germany. As a matter of fact, throughout the struggle, Spain was straining her industrial system to the limit in an effort to produce and forward supplies for the armies at the front, and Spanish volunteer regiments were fighting under the French flag, while none were in the service of Germany. So intensive was the effort to manufacture materials of war that the railroads could not obtain the requisite supplies for proper maintenance of their service, and they entered the era of peace in a badly crippled condition, from which the country has suffered as keenly as did the United States from a like cause.

On November 11, 1916, a law was passed by the Cortes, called the Law of Subsistence, which authorized the intervention of the Government in the conduct and maintenance of the railroads when necessary to satisfy the demands of internal commerce. The railroads have been appealing to the Government under this law for financial aid and for authority to elevate the tariffs. The employes also took occasion to demand relief, citing the same law as warrant for action that would enable them to secure better wages, which they thought should be met through increased revenues derived from higher rates.

The Ministry, headed by Dato, who is still in authority, was disposed to grant the demands of the railroad companies and the employes, but a bitter fight developed. The organs of the opposition parties, representing general public opinion, resented the imposition of heavier burdens on the people, so that Dato's majority in the Cortes disappeared and a deadlock was reached. In order to save himself and his Ministry from defeat, Dato persuaded the King to dissolve the Cortes and appeal to the country in a new election which is shortly to be held. Meanwhile an apparent change of front was made by Dato, who prepared an order in council which was approved

as a Royal Decree. In this order the popular demand for rehabilitating the railroads without recourse to increased rates was accepted. The Law of Subsistence was invoked as authority for authorizing advances to be made for the purchase of railway equipment. A joint commission was created to determine what material may be purchased, this commission being composed of technical members of the Council of Public Works and of technical representatives of the railroad companies. Each decision reached, carrying with it a special appropriation for specified materials, is to be subject to approval by the Ministry and the King, so that the greatest possible publicity and official sanction is ensured in each case. The material thus authorized is to be contracted for, the bids being open to competition, preference being given to Spanish manufacturers on even terms with foreign bidders.

The advances made to the railroads by the Government will constitute a prior lien upon the sums allocated as a credit for annual fixed charges, this being a special feature of the railroad administration under the Law of Subsistence, and the railroads are to repay the Government in 20 annual instalments, with interest at 5 per cent. These accruing obligations may be discounted at any time during the period of 20 years.

The argument of the parties in opposition to Dato was that the railroads should be able to facilitate traffic and thereby increase their net receipts on the existing schedule of rates, on account of improved permanent way and rolling stock, if provision were made for such betterments. They also insisted that nowhere in the world had reduced costs of operation followed increased rates, and that the means for improved earning power were to be sought in enforced economy, in providing high-class equipment, in careful maintenance of way, and in close attention to economic details of management. It was also urged that intelligent Government aid to rehabilitate the roads, in conjunction with reforms in the conduct of the business of the companies, would enable them to meet any legitimate demands of labor for higher wages.

It is now charged by Dato's political opponents that the recent Royal Decree, accepting the point of view of the public, which admits of refinancing the roads on favorable terms without revising the rates, is only a clever ruse to win popularity and secure a majority in the coming elections, after which a law would be passed practically nullifying this order and granting the railroads the increased rates that they have been seeking. Nevertheless, the new regulation has immediately become the basis for plans that will result in soliciting bids for large quantities of rolling stock, including locomotives, freight and passenger cars.

The temper of the people is so strongly opposed to anything that would increase the costs of living that it is unlikely that Dato could hold his expected majority in line for the enactment of a law which would undo the benefits expected to flow from the recent Royal Decree. Furthermore, the manufacturers in the port cities, especially in the great industrial district at Barcelona, speaking with the authority of enormous invested capital, are seriously opposed to an increase in freights. They fear the stimulus that would thus be given to manufacturing in the large centers of population on the plateau, that is, in the cities of New and Old Castile, representing the largest aggregate market in Spain. The rates on raw materials are so much lower than on finished goods that advantage would be taken of this differential to start many new enterprises.

A similar effect of high freight rates has been prophesied for this country, and many regard the decreased shipments, of which the railroads complain, as due in part to this cause. The freight differential, of course, most seriously affects the Rocky Mountain and Pacific Coast States, where great ac-

tivity in preparing for a manufacturing boom is announced. The inevitable tendency of high rates of freight is to localize industries, and to reduce the proportion of long-haul traffic. This effect is greatest in the case of those goods that pay freight on the higher schedules. The long-haul is relatively cheaper to handle, and pays proportionately larger profits if the quantity becomes an important proportion of the total movement. The Spanish experiment is one that involves principles worthy of serious consideration in the United States, especially when we hear of wholesale reduction in the force of railway shop hands, although only a few months ago the railroads were pleading for higher rates in order that they might bring up their depleted equipment and relieve the congestion that throttled business. Even now, official reports show a car shortage of 56,000 coal cars for the second week in November. The cities are suffering from a fuel famine at the beginning of winter, and the railroads are decreasing their repair crews so that the increased rates will not apparently be applied to relieve the difficulty. Because business has been temporarily halted, railroads should now do their utmost to prepare for the future, knowing full well that the time will come when increased activity will again bring on a railroad breakdown and possibly Government ownership unless ample provision is made to take care of future traffic increase.

RAILROADS STILL VERY SHORT OF ENGINES.

MORE locomotives are needed by the railroads. Never before was railroad traffic so great in volume as it is now, yet the roads are short of engines. Bulletin No. 4 of the "More Transportation" series issued by authority of the Association of Railway Executives reports that during the four years ended June 30, 1916, the average number of locomotives acquired each year by the Class 1 railroads was 2554 and the average number retired from service was 2071, leaving an average yearly increase of 483, but in 1917 and 1918 the locomotives acquired numbered 4951, and during that two-year period 2400 engines were retired, leaving an increase of 1275 engines a year, but this apparent increase was shown because there was a reduction in the rate of retirement.

According to this, it is evident that the railroads, lacking money, were obliged to hold on to and continue to use engines that would otherwise have been retired and new ones substituted for them. In other words, the Railroad Administration, striving for economy, went too far and starved the roads in equipment as well as in other ways. One of the results of this cheese-paring economy is shown in the statement made in the same bulletin, that on September 15 (the latest date named in the bulletin) there were over 17 per cent of locomotives out of service for repairs that would take more than 24 hours to make, and a little less than 6½ per cent out of service for repairs demanding less than 24 hours.

"As a basis for comparison, although the statistics were kept on a different basis at that time," remarks the bulletin, "in September, 1917, 13½ per cent of freight locomotives were in shops for repair or awaiting repairs," and it adds: "It must be agreed that the number of locomotives out of service for repairs is too many. It is too many even if there were in service all the locomotives needed. But since there is a shortage of locomotives, it is all the more necessary that the last ounce of effort should be exhausted to reduce the percentage of locomotives out of service."

Reading between the lines of the statement made in this bulletin, it is no doubt because the engines are worked too hard that so many are demanding repairs, especially extensive repairs. If there were more locomotives in possession of the roads, every engine could be gone over thoroughly after each run and small repairs made instantly, instead of letting them

go for a while, probably to develop a condition demanding extensive repairs, with consequent delays and increased expense for the work.

Reports to the Interstate Commerce Commission, from which the bulletin quotes, state that the railroads plan to purchase 1800 locomotives, which will cost about \$105,000,000. Thus they propose to add this year 1800 engines, or 750 less than the average annual number acquired during the four years ended with June 30, 1916, notwithstanding that traffic is far greater than it has ever been and the railroads are put to their wits' end to get the utmost service possible out of their motive power. The bulletin says "more service must be obtained from the locomotives we have."

Perhaps it is as much as the roads can do at present to buy 1800 engines. Capital is just beginning to feel some encouragement with respect to our carriers, and is taking equipment notes at rather more moderate rates of interest than was the case several months ago. But it is very uneconomic to drive machinery to the utmost if it be possible to ease it now and then, and there seems small probability of lessening the percentage of engines out of service for repairs just so long as traffic continues to flow in unprecedented volume and new engines cannot be acquired rapidly enough and in quantity sufficient to relieve the strain upon the present motive power resources of the roads.

That still more locomotives should be acquired is an imperative essential of the railroad situation. Every effort should be made to finance their purchase. As far back as 1901 to 1907, inclusive, the railroads bought an average of more than 4300 locomotives per year, while in 1905 their purchases of engines ran over 6200, and in 1906 over 5600, and in no one of the seven years did their purchases of locomotives fall below 3250. This indicates how serious must be the need of locomotives now.

THE SOUTHERN TARIFF ADVOCATE.

THE first issue of the Southern Tariff Advocate has appeared. It will be a medium for the presentation of the views of those thinkers who organized the Southern Tariff Congress in New Orleans, October 12, and for the presentation of striking facts in connection with the theory and practice of tariff-making. Southerners have been deprived of the benefits of constructive argument concerning protection by the virtually unanimous advocacy in their daily papers of free-trade doctrines. In economics, discussion of both sides of the question at issue is always valuable.

The Southern Tariff Advocate is, of course, non-partisan. Some of the ablest protectionists the country has known has been Democrats. The object is to discover whether protection or free trade is better for the South, not to ascertain the relative merits of competing office-hunters. Bismarck said, "The success of the United States is the most illustrious of modern times. It is my deliberate judgment that the prosperity of America is due mainly to its system of protective laws." Joseph Chamberlain, the great English statesman, said, "The countries which have adopted protection have improved in a greater ratio and more rapidly than we have ourselves." The Advocate declares that Calhoun was originally a protectionist, and Daniel Webster, when in the Lower House, was a free trader. Thousands of Southern men have decided that it is possible to be good Democrats and yet retain independence of judgment on an economic question.

The Southern Tariff Advocate has a distinct mission and can be of enormous value in the development of the South and the bringing to the section of such prosperity as it has never before known.

"No Such Power in the World Was Ever Before Contemplated As Is Now Concentrated in the Federal Reserve Board"—C. W. Barron of Wall Street Journal

A FEW weeks after the passage of the Federal Reserve Act, C. W. Barron of the Boston News Bureau and Wall Street Journal, published a series of 28 articles in which he analyzed the legislation. The articles at the time attracted wide attention among financiers and others, largely because Mr. Barron is a recognized authority on matters of finance, and has a way, too, of speaking boldly what he thinks, whether orthodox or not.

Mr. Barron in these articles is often antagonistic to what we believe to be sound doctrine at this time, but some quotations from his excellent study may be of great value to our readers. We quote from the articles in their book form, published under the title, "The Federal Reserve Act," by the Boston News Bureau in 1914.

"The 'motif' underlying the Federal Reserve Act is not that 'which is nominated in the bond.' 'An elastic currency' could have been had by an enactment of 20 lines. * * * The whole primary discussion of this bank act was to make money easier, to cheapen it to farmer and producer and manufacturer and merchant. Senators and Representatives both proclaimed, within and without Washington, that what they were seeking was a financial system that would give us an average rate approaching that of the Bank of France, where interest over a series of years averaged between 3 and 4 per cent."

It is quite important that this fact should be emphasized now, for the Federal Reserve Board has administratively taken the position that its true function is to make money dear. Congress legislated to facilitate the use of credit, as was justified by the enormous resources of the country. The Federal Reserve Board has adopted the absolutely opposite policy.

Mr. Barron prophesied that "the crisis, if crisis there ever be, will come about in the effort to attain that for which Congress has endeavored to legislate—cheap money." It is a peculiar thing that the crisis has developed in just the other way—by the insistence of the Federal Reserve Board on "dear" money.

We have before called attention to the almost supreme powers vested in the Board. This is what Mr. Barron had to say on that point:

"No such power in the world was ever before contemplated as is now concentrated in the as yet unannounced Federal Reserve Board. It is not only 'the reserve' banking system in itself, but when rates advance it becomes the most autocratic centralized banking power that was ever dreamed of in history, irrespective of whether the system embraces only the national banks or includes also the State banks and trust companies."

The rates have advanced and the board has fulfilled the prediction that it would become in such circumstances "the most autocratic centralized banking power that was ever dreamed of in history." There is not a business man in America, big or little, merchant or farmer, who has not read that fact in his ledgers during the past few months.

Mr. Barron then, commenting on a speech in Boston wherein Senator Owen had predicted stable money rates of not more than 4 per cent, said: "The attempt to compete with the bank of France in low interest rates will with rising prices invite the return of our investments held abroad, for we will be the dearest market in which to buy and the best market in which to sell." The war has changed us from a debtor to a creditor

nation, but the quick deflation of the dollar has put it at such a premium that we are not only, for foreign nations, the dearest market in which to buy, but we are so far and away the best market in which to sell that we are becoming almost overnight the world's dumping-ground.

"Its (the bank's) reserves will be accumulated in time of low money rates, and its profits will be made and accumulated in discounting at high money rates when there is universal demand over the world for money. Its safety will then lie not only in the expansion of its note issue, but in the removal of restraints from the reserves. When money rates are low, it should not expect to make the 6 per cent upon its share capital. When money rates are high, or above 5 per cent, it should steadily expand credit at a rising rate of interest, with that alone as governor, support the wings of reserve, and of power over reserves, of the regional reserve banks and the member banks. To do this effectively the Federal Board must always conserve gold when money rates are low and let that and its new currency and all credit fly freely to the ends of the earth on high and advancing discount rates.

"Recent computations have been made indicating that the gigantic banking business of Great Britain is carried on with less than 7 per cent of reserve moneys—6½ per cent is the actual figure. All efforts from economic writers and theorists of the whole world to induce England to carry a larger gold reserve have been unavailing. * * * Of course, the reason you cannot get up a gold scare in London is because her bankers' pocketbooks are filled with international bills payable in gold. * * * With our extravagant treasury and banking system and fixed and useless reserves, we have had a measure of salvation in this country through the private bankers. * * * Large deposits of money filter through private banking hands and find a 6 per cent basis of money reserve all-sufficient.

"If the Government has an obligation to stimulate and protect business by protective tariff—and both political parties have agreed to this—also to regulate transportation charges that injustice may not be done, it certainly has an obligation which it cannot delegate to any private or incorporated bank to protect the money rate from stifling commerce, enterprise or industry. It is just as much a function of government to protect the interchange of commodities among the people by safe and sound financial transportation as it is by any other transportation.

"In some years many more men are robbed of their goods by irregular money markets than there are sufferers by fire, flood and larceny."

Irregular money markets are costing the agricultural producers of the nation in this one year, in price declines, the estimated vast sum of from \$5,000,000,000 to \$8,000,000,000, or about a third of the total war debt.

"The cry that has gone up from Congress has been 'Unshackle business!' 'Away with stocks and bonds and Wall Street!' 'Give hogs and hens, beef on hoof, cotton in bales and wheat in barn the right of way to market!' 'We will build a bank act that will give commerce right of way to bring raw products from farm to factory and family.'"

It was undoubtedly the purpose of the act to facilitate the financing of agriculture and give the producer a fair chance in the marketing of his products. But the Secretary of the Treasury, bound by oath to execute the law faithfully and fairly, wrote the representatives of the great cotton industry

to say that he did not think it wise for the Government to stimulate or aid in stimulating sales of cotton to Central Europe, because Central Europe did not have the money to pay cash and heavy sales abroad might keep prices up in this country. It would appear that the Federal Reserve System has been prostituted in administration to the service Congress intended it should not perform, and is prevented by administration from doing the things it was instituted to perform.

"With confidence, credit comes fully forth, and with full credit there is little need for currency or treasury reserves. Until one or the other is called for, the Federal Reserve Board can have little control **unless it undertakes to regulate the future in finance and raises the money rate and curtails credit when confidence is in full swing.**"

That is exactly what the board did undertake to do, and the present status of industry in America is the result.

Mr. Barron, of course, as we do, insists that there should be a proper reserve. The most terrible of all things is wildcat financing, particularly by governments. But what most students outside of the banking profession have felt for years, and what recent events have fully established, is that orthodox banking has played so safe that it has hedged business around with restrictions alarmingly destructive. It is one thing to be safe, and it is another thing to be too safe. A saw can be conserved by putting it in an oil bath behind twenty locked doors, but protection of that sort would surely be extravagant. Twentieth-century business cannot function with obsolete financial implements. Modern finance is hardly fifty years old. Some think it is an exaggeration to call it "modern." Certainly any financial system which admits its inability to function because there is "too much business," and can find no solution for its inefficiency except the halting of progress, the shutting down of factories and the squeezing of industry down to fit a strait-jacket, is fatally defective. Perhaps few men realize that financial transportation has failed in this country just as certainly as railroad transportation failed last spring, and that the Interstate Commerce Commission has been guilty of no more drastic edicts in regard to priorities than the Federal Reserve Board has in the uses of credit.

"A mighty feast of fat things awaits the world of trade," President Wilson is said to have declared when he signed the Federal Reserve Act. It was the visible evidence of an epochal advance in the national concept of the possibilities of credit. But the President did not at that time imagine, we believe, that his own appointees, seven years later, would be issuing edicts to the effect that famine was preferable to feasting and that there must be an end to "fat things."

Since the above was written our attention has been called to an interview given by Mr. C. W. Barron to the American Magazine and republished in the Wall Street Journal last July. Mr. Barron was quoted as saying:

"There is not a single reason why this great continent should not enjoy a continuance of vigorous, healthy, booming business.

"We produce 60 per cent of the world's cotton, 62 per cent of its copper, 66 per cent of its oil, 50 per cent of its pig iron and steel, 85 per cent of its automobiles, 45 per cent of its grain, 75 per cent of its agricultural machinery, 70 per cent of its telephone apparatus, 85 per cent of its typewriters, 50 per cent of its ships and 75 per cent of its packing products.

"We lack only one thing, intelligent direction of the country's capital, and supplies of gold, money and credit by the authorities at Washington.

"We have locked up in the 12 Federal Reserve Banks throughout the country a greater amount of gold than any other country has ever possessed, an amount sufficient to warrant the issuance

of a great deal more credit to legitimate business borrowers than the Federal Reserve Board has been in favor of.

"Some two billion dollars more credit could be granted by our financial institutions, without bringing the percentage of our gold reserves down to anywhere near the percentage of gold held by Britain, or France or any other leading country.

"Strange as it may sound, much of the progress of America has been due to the fact that fools have rushed in where angels would have feared to tread. The more knowledge and the more means a man has, the more timidity and caution he develops. It is the young man who goes ahead, borrows money courageously, undertakes new enterprises, eagerly accepts risks, and accomplishes new and big things."

The timidity of the Federal Reserve Board has cost the farmers of the country alone from five to eight billions of dollars.

GERMANY'S WAR AFTER THE WAR.

BEFORE the World War Germany's chief weapon in conquering trade consisted of the institution known as the Kartel. It proved almost irresistible. Students of affairs have marvelled that the advisers of the Kaiser did not hold him in check, and allow the Kartel system to do its work in routing competition in foreign trade, which soon would have meant peaceful world dominance. The system was cutting into the commerce of Great Britain so heavily that industrial discontent was growing at a more rapid rate in that country than in any other of the leading nations of the world. British factories were closing or reducing their operating time, or curtailing their force of employees. England was on the point of revolution, and the reason was hunger, because there was insufficient employment to feed the people.

That formidable system, developed quietly, and without sanction of law, in Germany, is now to be made the great engine, organized under State supervision, for competing once more in the markets of the world. This is the "Stinnes plan," that has just been reported favorably to the German Parliament by the Sub-committee on Socialization. It is not an experiment; it is a plan which, in its essential features, has been thoroughly tried and has produced results. It is familiar to the people, and they know that it gave them power and invincibility in world trade. They believe it will do so again, and it assuredly will unless it is met by similar or better devices in other countries.

The Kartel system has been frequently described; the details can be found elsewhere. It consists of an association of enterprises. There were various Kartels, each one representing related industries. They were all tied together through the banks, with the Central Reichsbank as the general clearing institution. The Kartel assisted individual members in financing new business and trade propaganda; it absorbed losses of individuals, and shared their prosperity; it facilitated credits for the expansion of the business of members of the group; it distributed orders from abroad among the members in such a manner as to ensure the most economical possible position. If a foreign buyer wanted a big pumping plant, all the multitudinous parts that were needed were manufactured by members of the group, each according to his facilities for high capacity or economy, or both. If a locomotive order were to be filled there was no cut-throat bidding. A farce of bidding was maintained to fool the foreign buyer, but the Kartel controlled the negotiation, and a profit was assured. In a new field, orders would be taken at a loss to drive out competition, and this loss was distributed, being compensated by profits in other fields where the trade was securely held.

Hugo Stinnes has merely resurrected this old tried plan of

the imperial epoch, and he proposes to link the power companies and coal mines into it. Apparently, there is to be merely one big industry, composed of all the leading industries of the country. There never has been so elastic, shock-absorbing a commercial and manufacturing organization in the world as this would be. It offers an opportunity for the application of the most refined methods of efficiency, of that kind of mechanical accuracy which is the chief characteristic of the German individual and collectivistic brain.

Efficiency is not equal to competency, but it is capable of being extended over the incapable as well as the capable, and thus bolstering up the weaker individuals. Competency is a higher and finer quality, but is harder to harness for teamwork. The Stinnes plan means national, team-work, and it will become a giant against which only giants can contend.

It is something that every man, woman and child outside of Germany must study and understand in its uttermost detail, because we also, and every nation that seeks foreign trade, and that seeks to prevent the monopolization of its domestic trade, must create a corresponding form of teamwork, or the "made-in-Germany" brand will once again become supreme. This is the real beginning of the systematic "war after the war," of which so much was heard from the time of the "Paris Economic Congress" in 1915, onward; only, it so happens that we have to face Germany, who was not permitted to be crushed as she would have been.

It is also interesting to note that Hugo Stinnes has proposed only to consolidate or "socialize" the leading existing industries. He recognizes the right to free individual industry, and in this he has preserved a vitalizing force that will make the new Germany still more formidable. The individualist will develop the higher initiative and the more creative effort, which will constantly feed and stimulate the socialized organization that otherwise might fall under the paralysis of bureaucratic methods. The proposal of the extreme socialists in Germany to communize industry would have led to dry-rot, and such a system would not have been hard to combat. The Stinnes plan, however, is vital, and possesses the qualities of success. It is another proof of Hugo Stinnes' judgment and power as a real leader. It is for us to take warning and prepare to withstand the commercial assaults that Germany will make upon the world trade.

FUTILE EFFORT TO SHOW THAT THERE IS NO CREDIT STRINGENCY.

THE financial columns of most of the daily newspapers reek with misinformation as to the credit situation. So usually well-informed a newspaper as the New York Times, for instance, says editorially that "there is no suspicion of a shortage of currency. Rather there are signs of a redundancy," and then goes on to add that "the record shows that the supply of credit has been as unprecedented as the supply of currency." The statement means, if it means anything, that there has been a redundancy of credit, and an effort is made to support this view by quoting some Federal Reserve Board rediscount figures.

The fact is that banks all over the agricultural districts are calling loans. Within the week we have seen a notice from a bank to a customer who had his loan protected by collateral, in which he was informed that while his paper was wholly beyond question, yet the stringency of credit made it absolutely imperative that he repay his loan. It is a typical case. The same thing is going on all over the country. And even more insistent are the banks in cases where farmers have no collateral and have borrowed simply on their notes. It is sheer nonsense for financial experts to assert that a condition does not exist when notoriously it does exist. Credit is tighter than a tow-line in most agricultural communities.

Moreover, the financial experts of the Times and other newspapers know, as the New York Herald expert declares, that "1921 is likely to see enormous financing for foreign Governments, our own State, municipalities, railroads and industrial corporations. It is important, therefore, that banks should conserve their resources and fortify their reserve position as much as possible." They are fortifying their reserve, and that is why there is a credit stringency that is particularly disastrous to those who farm.

WANT WAR FINANCE CORPORATION REVIVED TO RELIEVE DISTRESSED FARM PRODUCTS.

AT the moment of going to press the following important item of news comes by wire from our correspondent at Chicago:

[Telegram to Manufacturers Record.]

Chicago, Ill., November 30.

The board of governors of the Farm Mortgage Bankers' Association of America went on record in a meeting just concluded in favor of the temporary revival of the War Finance Corporation under the Edge law to finance the marketing of accumulated stocks of cotton, wheat, corn and livestock, so that the pressure on the market might be distributed over the entire year.

"The very rapid and drastic reduction in the prices of farm products threatens serious embarrassment to the farming industry and all agencies dealing with the farm," read a resolution passed. "Although we are in a period of necessarily falling prices, the present levels in prices of farm products are proportionately too low."

The Mortgage Bankers commended laws pending before Congress dealing with short-term credits, particularly the McFadden Bill, and urged immediate action by that body.

THE CHALLENGE OF THE ALIEN.

WE cannot afford to have this a Government of associated nationalities. The hideous menace of the hyphen was revealed three years ago in striking-enough fashion to satisfy any true American. When men vote in American elections in a compact body as Germans or Italians or Irishmen or Finns, or something else, they constitute a threat against the integrity of our institutions. We can train their children to be good Americans, in most cases, but the changing of a government-hating European serf into a patriotic citizen, with American ideals, is not a task that can be accomplished within a year or two.

It will be quite useless for us to maintain a great navy and land fortifications for the national defense if hordes of foreigners are to be admitted into the country without restriction and thereafter are to have a voice in determining national policies. The ballot box might readily, in such circumstances, become our destruction instead of our salvation.

The study of the immigration situation has not developed to the point where it is wise to advocate prohibition of all immigration for two years or for any set period of time. The test is our digestive ability. But what is readily apparent is the fact that the present control of immigration by means of passports cannot be discontinued before Congress has enacted another system of stringent control to take its place. We can gather in and assimilate a great number of foreigners, and show them the road to prosperity, but we cannot swallow degenerate myriads of aliens without serious interference with our interior apparatus.

Sharp Difference Between Inflation and Expansion of Credit for Production Purposes

By United States Senator ROBT. L. OWEN.

Deflation means the abatement of inflation.

Deflation carries with it the charge of a previous inflation which needs abatement.

To determine when deflation is justified, it is essential to have a thoroughgoing understanding of what inflation is, and that such inflation has taken place.

What is an inflated credit? Evidently it is an unsound credit not justified from a private or public standpoint. It is a credit which cannot be liquidated within a reasonable short time, or a credit based upon conditions which will not automatically, within a reasonable time, liquidate itself. It is a credit extended beyond the probable ability of the debtor to pay when called on to pay.

Expansion of a credit based actually on commodities in process of marketing is assuredly not inflation. If the country produces a gigantic volume of goods which the world needs, and which can be marketed, the extension of credits for such purposes may be an expansion of credits, but it is not inflation. The extending of credit to manufacturers and merchants against marketable stable commodities in transit from the sources of production to the consumer may be expansion of credit, but it is not inflation, no matter how large the expansion may be. Indeed, the greater the production of a country becomes the larger this expansion may be, and still not be subject to the charge of inflation.

When a country like the United States has established a banking system like the Reserve System, it enables the banks of the country to create legitimate credit to meet legitimate production, and this has taken place in the United States.

When the United States Government, for purposes of protecting its life, had occasion to buy commodities and services on a large scale during the recent war and issue its bonds, **it was an expansion of credit, but it could not be properly called inflation justifying deflation.** These bonds provide for their payment under a reasonable interest charge at fixed future dates. Their security is the security of the property of the people of the United States, and of their productive power. These securities are backed by the taxing power of the Government of the United States, which is a stable Government, a prudent Government, that can be relied upon to take the necessary steps to liquidate these obligations as rapidly as is justified by a wise public policy. **Therefore, this extension of credit, although an expansion of credit reaching twenty-five billions, is not an inflation of credit justifying deflation.**

The commodities and services bought by the United States resulting in these securities were created by the intense activity of the American people and the stimulation of war, but their values were actually created, and they were delivered by some of the people for the benefit of all of the people, and "all the people" in due time, in accordance with the terms of the bonds, will repay "some of the people," who hold the bonds the amount represented by these Government securities. The Government securities represent an *expansion*, but *not inflation*.

When credit is extended by commercial banks for *investment purposes* in such manner as to *congeal its liquid assets*, such an institution is putting itself in a position where it cannot meet the legitimate demands of commerce upon such an institution, and credits so extended are not justified, from the standpoint of sound financial management, or from the standpoint of the bank itself, or from a public standpoint. Therefore, such credits may be regarded as an inflation of credit justifying deflation, since the credits are fundamentally unsound from a standpoint of such an institution and from the standpoint of the public, under whose charter such bank receives deposits as a quasi public trustee for the depositors.

When the bank lends its liquid resources to a speculator in stocks to such an extent as to impair its legitimate duties to commerce and industry under a sound banking system, such credits are inflated credits, deserving deflation.

When such banks extend credits for the hoarding of commodi-

ties by speculators or profiteers, who are holding such commodities from the market with a view to speculating on the public and profiteering on the public, such credits may be legitimately regarded as inflated credits, justifying deflation.

On the contrary, when banks are using their liquid credits by loans or in acceptances for the service of legitimate production and distribution of stable goods required by the public, although such credits may be expanded, they should not be regarded as inflated credits, but as sound credits, and such credits should not be deflated.

Legitimate commerce should be content with a reasonable profit on its turnover, and if the extension of credit is attended by abnormal high interest rates, by the threat of industrial depression, by the menace of forcible deflation, legitimate production and distribution is necessarily interfered with, and such a policy of deflation, so-called, is in reality merely a denial of legitimate credit, is merely a constriction of legitimate credit, which is not justified on the basis of sound finance or of a sound public policy.

Deflation and Depression as Viewed by London Financial Authority.

[From the London Financier.]

Happenings in other countries have demonstrated the risks to be faced in a too rapid downfall of prices and a too rapid deflation of the currency. The latest illustration of such dangers has come from Cuba, which has faced a sudden bank crisis, the effects of which have been felt in markets here. This crisis was the effect of a sudden fall in prices, particularly in sugar, the staple product of the island. The Cuban banks finance this commodity to a considerable extent, and the crisis was due to the fear that these institutions might be seriously affected, and hence it led to a "run," one of the banks being compelled to suspend payment. As is well known, the Government declared a moratorium until December 1, and depositors were precluded from drawing more than 10 per cent of their balances.

The uneasiness resulting from this incident has not passed away entirely, but the anxiety is considerably lessened, the latest advices from Cuba being of a reassuring character. It is stated that much help has been rendered in various ways by the United States, and this has strengthened the hope that all difficulties will be overcome and the position be restored to the normal before long.

Although such crises are not likely to happen in this country, nevertheless there is a danger of serious consequences of a financial character happening from too swift a fall of prices. **This is why the conservative-minded warn us that a gradual rather than a rapid fall in prices is desirable, for financial embarrassments in industrial quarters would have widespread consequences, multiplying failures and deepening depression, to say nothing of the possible consequences on the stock exchange prices of all kinds of securities.**

The Brussels Committee, amongst their several recommendations, say: **"The reversion to, or establishment of, an effective gold standard would, in many cases, demand enormous deflation, and it is certain that such deflation, if and when undertaken, must be carried out gradually and with great caution, otherwise the disturbance to trade and credit might prove disastrous."** These views are not too strongly worded. Theorists and impractical people have cried out for swift deflation and have apparently not had the vision to picture the disasters this might bring about. In the United States the same policy has been put into effect as in this country in the way of restricting credits, and this has put some people into insolvency.

In Great Britain we have witnessed no disasters, but, all the same, rapid deflation cannot be put into operation without causing much embarrassment in the industrial and commercial world.

Southern Tariff Association Completes Organization

COMMITTEE APPOINTMENTS ANNOUNCED AND MEETING OF SECOND CONGRESS FIXED FOR JANUARY AT ATLANTA.

[Special Correspondence Manufacturers Record.]

Houston, Tex., November 23.

Permanent organization of the Southern Tariff Association was effected at a meeting of that body here today and the framework of the association completed. Atlanta was selected as the place for holding the next Tariff Congress, the dates being January 27-29.

The meeting here was addressed by President John H. Kirby, Al. McFaddin and others. In the course of his address Mr. Kirby declared that industrially the South today is in the same position that it was at the close of the Civil War. Comparing the present unsettled condition of industry with the depression of '65, Mr. Kirby painted a gloomy picture for the South unless immediate relief can be obtained by means of tariff revision, giving equal protection to all industries, classes and sections.

"From an industrial standpoint, the South stands where it stood at the close of the Civil War," Mr. Kirby stated. "Her devastated industries are as badly trampled under foot by the discriminating agencies of government as they were by the mailed hoof of the Northern army in Sherman's march through Georgia.

"Freeing the slaves was no greater disaster to the industrial welfare of the South than turning loose the provisions of a tariff act which protects the manufacturer and forces the producer to come into competition with every country on the globe.

"The Southern Tariff Congress was organized to assist in taking the tariff question out of politics, and until this is done the productive industry of the South will continue in that state of uncertainty which is driving the population from the country to the city, with a result that will be fatal to the economic life of the nation.

"That the non-partisan spirit is popular and the accepted basis upon which the South is willing to settle the tariff issue is demonstrated by the co-operation and assistance which we are getting from the Governors of Southern States, members of Congress, commissioners of agriculture, chambers of commerce and industrial and farm organizations of the South.

"It is a misfortune of government that our tariff policies should be made a political issue and the life of an industry put on trial at every national election. Such a policy forces a strong element of speculation into industrial investments and compels property to enter politics against its will.

"The tariff question is an economic one, and it is the function of the Southern Tariff Association to endeavor to place it in its proper sphere."

The spectacle of cowhides being allowed to rot on the ranches of Texas because the price is too low to justify sending them to the market is a common occurrence, according to Al. McFaddin of Victoria, pioneer cattleman of this State and prominent as a leader of industrial thought of the South.

The price of cowhides has dropped from 48 cents to 4 cents per pound, according to Mr. McFaddin, who stated that he had long since discontinued having a carcass skinned on his ranch, and that he did not intend to purchase any more sheep or cattle until a tariff was placed on wool and meat to protect the producer from competition with foreign countries.

"The price of hides is lower than at any time in history," Mr. McFaddin stated. "And yet the farmer is called upon to pay \$13 for a pair of shoes. The sheep industry is also suffering from the policy of the present tariff act. Last year nearly 150,000,000 pounds of mutton were brought in from Argentina and New Zealand in competition with American-grown meat and sold as far west as St. Joseph.

"The farmer is one of the heaviest losers under the free-trade system. The drop in cottonseed prices from \$84 to \$24 per ton is evidence of the havoc the present system is playing with him. The farmer thinks the cottonseed-oil men are robbing him, when to my certain knowledge the oil men themselves are going broke.

"If the farmer is unable to get good prices for his product, he will drift from the farm to the city; in fact, he is already doing it, and over 50 per cent of our population now lives in the cities, and if this keeps up it means that the bread line will be lengthened and that poverty will stalk over the land.

"I had the pleasure some time ago of entertaining a British colonel from India, who was in this country investigating agricultural conditions. I asked him if the price of labor was increasing in Europe. 'Oh, yes,' he stated. 'Since the war labor has gone sky high. Why, don't you know we are paying our help 17 cents a day in India, but, of course, we don't have to board them.' And thus the American farmer is compelled to come in competition with countries whose living conditions are far below our own, and with labor at an average of \$2.25 per day and board he is compelled to sell his product in competition with those produced by labor of the type referred to by the English colonel."

The permanent organization of the association was effected by the appointment of the following permanent committees:

Executive Committee (duties defined by constitution).—To be composed of one representative from each organized industry, five or more commissioners of agriculture, five or more presidents of commercial organizations, five or more representatives of labor, and five or more business or professional men to be appointed by the president. Buckner Chipley, chairman, New Orleans, La.; Henry E. Watkins, vice-chairman, Atlanta, Ga.

Women's Division.—This department shall undertake the organization of the women of the South into separate units of activity paralleling and reinforcing the general work of the organization, and sending delegates to the congress. Mrs. Chas. A. Farwell, chairman, New Orleans, La.

Agricultural Committee.—This committee to be composed of State commissioners of agriculture, farm organization presidents, representatives of farming interests, representatives of allied industries and of business men; also industrial agents of railroads. The duty of this committee shall be to solicit farm organizations to endorse our declaration of principles, send delegates to our congress, organize local tariff clubs in rural districts throughout the South, and to otherwise promote the interest of agriculture. N. A. Shaw, chairman, Texarkana, Tex.; J. J. Brown, vice-chairman, Commissioner of Agriculture, Atlanta, Ga.

Industrial Division.—This committee to be composed of presidents of organized industries or representatives selected by those industries, and of business men actively engaged in those industries. The duty of this committee shall be to solicit all organized industries to join the Southern Tariff Association, to send delegates to the congress, and to recommend such activities as can be carried on more economically and effectively through joint effort than by separate units of organization. Frank A. Godchaux, chairman, New Orleans, La.; P. D. Bain vice-chairman, Norfolk, Va.

Commercial Division.—This committee to be composed of presidents of leading Chambers of Commerce throughout the South. The duty of this committee shall be to solicit all commercial clubs of the South to endorse the declaration of principles of the Southern Tariff Association and to urge all clubs to appoint delegates to the congress. E. R. Black, chairman, Atlanta, Ga.; president Chamber of Commerce.

Committee on Tariff Schedules.—It shall be the duty of this committee to prepare for presentation to the United States Congress a tariff schedule on Southern products. Hon. Thos. W. Hardwick, chairman, Governor-elect of Georgia, Atlanta, Ga.

Committee on Arrangements.—There shall be a committee on arrangements appointed to have charge of the program and entertainments and direct the proceedings of the congress. The chairman of this committee shall be director of the congress. R. B. Creager, chairman, Brownsville, Tex.

Program Committee.—The duty of this committee is to arrange a program for the congress. Composed of secretaries of leading chambers of commerce of the South. E. L. Robertson, chairman, Atlanta, Ga.

A strong finance committee was appointed, with Al. McFaddin of Victoria as chairman and the following members to assist him: Ike T. Pryor, San Antonio; Marion Sansom, Fort Worth; W. T. Waggoner, Fort Worth; A. B. Robertson, Slaton; Ralph Harris, San Angelo; J. J. Waelder, Victoria; R. F. Crow, Houston; Ed. Woodall, Hillsboro; John W. Underwood, Honey Grove; J. S. LeClercq, Dallas; J. W. Simmons, Dallas. This committee will hold a meeting within the next few days and get the finances for Texas completed, and a committee for each State will likely be named to arrange for financial assistance from all Southern States.

Contributions from the cottonseed-oil men for \$1000 and from the peanut association for \$1000 were given at the meeting today, as well as individual subscriptions amounting to several hundred dollars.

The press committee, with Louis J. Wortham, editor of the Fort Worth Star-Telegram as chairman, was appointed to line up the newspapers of the South in the fight for a tariff protection for raw material.

Low Prices, Unemployment and Business Depression the Natural Outcome of Forced Deflation

(RICHARD H. EDMONDS, in letter to Raleigh (N. C.) Times.)

From Richard H. Edmonds, editor of the MANUFACTURERS RECORD, who writes from Southern Pines, the Times has received the following letter under date of November 20:

"In your editorial of yesterday you rather intimated a question as to the correctness of my statement that the Federal Reserve Banks have been earning at the rate of 150 per cent. The exact figure of the average earnings for the 12 banks for the first six months of this year, as officially reported by the Board, was at the rate of 151 per cent. The New York bank during that six-month period earned at the average rate per year of 204 per cent.

"It is true that the bulk of these earnings are paid into the Treasury of the United States, but to collect from the public so vast a sum through the earnings of the Federal Reserve Banks does not simply mean that the people have been robbed for the benefit of the Government to the extent of these earnings, but it means that the high rate of interest which the Federal Reserve Banks are charging to member banks necessitates a high rate of interest from these banks to their customers, and thus the public is robbed to an extent many times as great as the earnings of the Federal Reserve Banks themselves. When the Federal Reserve Banks charge 7 per cent to the member banks, the member banks have to add a profit on top of that to take care of their fixed charges in handling money. Some of them do it by a direct high rate of interest. Many of them are doing it by requiring their customers to keep on deposit a larger amount of money in proportion to their borrowings than formerly. For instance, if a man wants to borrow \$10,000 needed in his business, many banks are requiring that he borrow from \$12,500 up to as high as \$15,000, leaving with the bank on deposit and not to be used by him all of the difference over the \$10,000. Some of the banks require that a certified check shall be given to them for this difference, so that the borrower cannot draw against that amount. This excess is then loaned out to somebody else, and in this way the bank gets practically double interest on the excess when it is loaned out to somebody else. That is one way in which the banks have found it necessary to operate under the high rate of interest which the Federal Reserve Banks are charging them.

"More than a year ago the Federal Reserve Bank of Richmond began a campaign of sending circular-letters, generally monthly, to member banks, urging that they should "curtail" credit; that they should restrict credit and in every way possible seek to impress upon member banks the danger of not limiting credit and holding all loans down to the minimum. I recently published these statements month by month in the MANUFACTURERS RECORD, showing exactly how persistently and ceaselessly the Federal Reserve Bank of Richmond had sought to force this restriction of credit. The action of that bank was simply in harmony with the action of the Federal Reserve Board. The Federal Reserve Board announced some months ago that in this credit-restriction policy it was planning to increase the production of essentials and reduce the production of non-essentials, a wholly fictitious assumption.

"The campaign inaugurated by the Federal Reserve Board for the deflation of credits and of business and the breaking down of prices has brought poverty where there had been abounding prosperity. It has enormously increased the production of failures. It has increased the poverty of the country. It has increased non-employment. It has increased turmoil and unrest. But no one can possibly call these things "essentials," and yet this is what the Federal Reserve Board, operating on its wholly false economic and financial basis, has brought about.

"When the Board began this campaign a year or more ago it seemed very evident to me that any intelligent man in the country who knew the plan would be absolutely certain that nothing but disaster could follow such drastic deflation. From the beginning I unceasingly opposed it, and early last winter warned the Board and the country that this drastic campaign of deflation would mean drastic destruction of business.

"The campaign has brought about a decrease of at least \$5,000,-

000,000 to \$6,000,000,000 or more in the value of the farm products of the country. It has cost the merchants and the manufacturers billions of dollars in the depression of their stocks and the disruption of business. It will cost the Government several billions of dollars in loss of revenue from income taxes, for the country this year will have very little profit out of which to pay excess profits taxes.

"Not a single statement on the subject which I have made and reiterated week after week for the last 10 or 12 months has failed of fulfillment. I claim no gift of prophecy nor of special knowledge on the subject, for it has seemed to me that no man who had followed the history of the great wars of the world and of quick deflation thereafter could possibly see any other outcome than that which this country now faces.

"We issued our \$25,000,000,000 or so of bonds on a basis of high prices and high wages. By forcing drastic deflation and cutting down prices of farm products and of wages, the burden of indebtedness of the country has practically been doubled. Speaking in terms of labor or of products, it would take twice as much cotton at 20 cents a pound as at 40 cents a pound to pay off the indebtedness incurred with 40-cent cotton. It would take twice as much wheat and corn to pay off the indebtedness at the prices prevailing when the bonds were issued. Therefore, the country has been saddled, measured in terms of production or of labor, with a volume of indebtedness at least twice as great as that which shows on the face value of the bonds. We have thus by the drastic deflation of the banking interests represented by the Federal Reserve Board and other financial forces at work doubled the burden of the country in carrying our bonded indebtedness, and a few weeks ago I published a statement from the First Federal Foreign Banking Association of New York that the League of Nations was carrying on a world-wide campaign of deflation of credits, and the reports of the last few days show that the League is giving much attention to the discussion of the financial problems of the world.

"If by its campaign of deflation the prices of products—cotton, corn, wheat and other things—can be reduced as has been done within the last two or three months, Europe can supply its needs of foodstuffs and cotton and other raw materials at a saving of several billions of dollars a year as compared with the prices which prevailed a few months ago. No wonder the League of Nations is interested in carrying on a world-wide campaign of deflation! But the amazing thing is that the Federal Reserve Board, which was organized for the express purpose of giving liquid credit to the farmers and the merchants and the manufacturers of America, has for 12 months been engaged aggressively in a campaign to break down prices, which, of course, mean lower wages and millions of people thrown out of employment.

"The question at issue is one of the greatest that this country has ever faced, because adequate credit to the farmer as well as to the merchants and manufacturers is absolutely essential if they are to continue business and employ labor. It is the life-giving nourishment to prosperity. Curtail that credit and you take from all business the nourishment without which it cannot live."

Wallboard Plant May Locate at New Orleans.

New Orleans, La., November 20—[Special.]—Representatives of Eastern interests, whose identity cannot be learned, are making careful investigation of the possibility of establishing a \$500,000 plant here for manufacturing a composition wallboard from bagasse, the residue of sugar cane after the juice is extracted. It has been successfully used elsewhere in manufacturing certain varieties of paper.

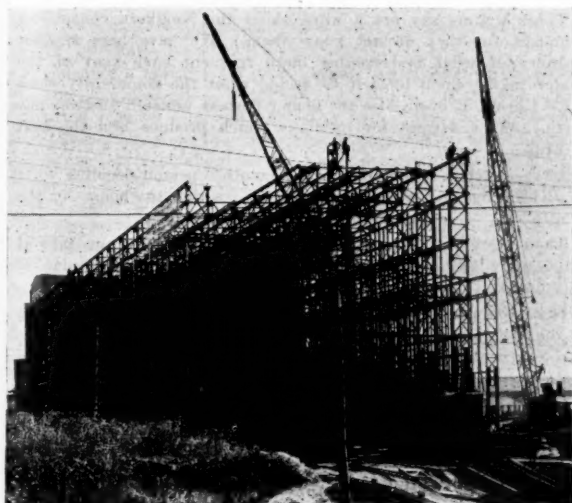
It is said that B. G. Dahlberg, who represents these outside interests in New Orleans, has purchased a large tract of waterfront property upon which the plant will be erected. Large docks will be built, and excellent railroad facilities provided.

Acid Plant Nears Completion at Baltimore

WILL HAVE DAILY CAPACITY OF 250 TONS OF 50° BAUME SULPHURIC ACID.

One unit of the new plant of the Union Acid Works, Inc., in Curtis Bay section, Baltimore, will be placed in operation by the first of the year. Construction work is being rushed on the entire project in an endeavor to complete the plant of the company, which has offices at 1214 Continental Building, Baltimore. This new plant, which will manufacture sulphuric acid, is of the two-unit type, and will have an output of 250 tons of 50° Baume acid every 24 hours. All that is latest and best in equipment for the manufacture of sulphuric acid has been adopted in this plant with a view to greatest possible economy in operation, and but 22 men will be required for operation at the maximum capacity.

The plant is located on Curtis avenue and west of the Standard Acid Works and the Standard Wholesale Phosphate Co., whose new plant is now fast nearing completion. It is entirely fireproof, being built of concrete, brick and steel, with fireproof sides and roof and steel sash throughout. It consists of the



CHAMBER BUILDING OF UNION ACID WORKS, INC.

chamber building of steel construction, a tower building of concrete, brick and steel, and a combined furnace and storage building of steel on concrete foundations. The U. S. Gypsum Co. standard long-span channel section pre-cast gypsum roof tile is used upon the roof. The sides of the furnace and chamber buildings are covered with H. H. Robertson Company asbestos protected metal.

The acid chamber, which is located on the end of the tract, is 250 feet long, 160 feet wide and 80 feet high at its highest point. In its construction 1400 tons of steel and 43,000 rivets were used. It will contain six lead chambers for each unit, the average chamber being 30x60 feet and 45 feet high. Realizing the difficulty of obtaining chemical materials, work was started many months ago upon the lead work, so that today it is being quickly installed and with no possibility of a delay because of non-receipt of lead. Many lead-burners have been employed in this work, and all the small and tedious parts have about been completed and are ready to be connected with the main units as needed.

The tower building adjoins the chamber structure and is 50x200 feet and 80 feet high. It is built upon concrete foundations three feet thick and contains 1,050,000 building brick, besides much steel and concrete. Within it are to be placed two Glover and 4

Guy Lussac towers. These towers are of chemical brick and acid-proof cement. These towers will be packed with the latest designed spiral rings, and 6,000,000 three-inch and 500,000 six-inch rings will be used in addition to about 600,000 chemical brick.

The furnace building adjoins the tower building and is a steel structure 120 feet long and 150 feet wide, and 55 feet at its highest point. In its construction 300 tons of steel and 6000 rivets were used. It will contain a battery of six rotary sulphur burners made by the Glenn Falls Machine Co. of Glenn Falls, N. Y. Each of these burners is 48 inches in diameter and 20 feet long. In this building room will also be provided for the storage of from 5000 to 6000 tons of sulphur.

This plant will use Southern sulphur entirely in the manufacture of its product, and it will be brought to Baltimore by vessel and discharged at the company's wharf on Cabin Branch Creek and brought to the plant by means of electric locomotives operating upon a steel trestle. This trestle will be over 1000 feet long, and will contain 200 tons of steel and 6000 rivets, being placed upon concrete foundations. It averages 30 feet high, and has spans of from 20 to 30 feet each.

Twelve wells 100 feet deep were driven to act as air lifts for automatically handling acid from the pumproom, on the ground floor, to the top of the towers. The casing of these wells is eight-inch extra heavy wrought-iron pipe plugged with three feet of concrete. They are located under the chamber building.

An elevated steel tank is to be erected south of the buildings to provide for storage of acid and for loading into railroad tank cars by gravity. It will have a capacity of 400 tons.

In addition, a steel storage tank upon a tower 75 feet high will supply water for operation of the plant and also serve as a fire protection. It will have a capacity of 70,000 gallons. Two centrifugal pumps connected will be employed in pumping the water. An eight-inch water line has been laid from the plant to the creek to furnish water for other purposes. A complete sewer system was constructed.

An Ingersoll-Rand air compressor with a capacity of about 1200 cubic feet will be used in operation of the plant. It will be driven by a 200-horse-power slip-ring motor.

The entire plant will be electrically operated. A substation 22x40 feet has been built nearby to step-down the current to the correct operating voltage. It is a brick structure with a concrete roof of flat-slab design.

Much of the material used was purchased from the Government departments having surplus chemical manufacturing equipment, and a big saving was effected thereby. Ground for the plant was broken last April, and work has progressed steadily ever since, being delayed only by non-receipt of necessary materials.

Much of the material, including the sand, gravel, cement and bricks, was furnished by local companies. The steel was furnished and erected by the Shoemaker-Satterthwait Bridge Co. of Pottstown, Pa. The Whiting-Turner Construction Co. of Baltimore did the concreting, excavating and brick work. B. Milflin Hood of Atlanta, Ga., furnished the spiral rings and chemical brick. The Baltimore Brick Co. furnished the building brick.

The plant was designed and its construction supervised by the Chemical Construction Co. of Charlotte, N. C.

Toy Factory to Open at St. Petersburg, Fla.

St. Petersburg, Fla., November 29.—[Special.]—A toy factory which will employ 100 persons when operating at capacity is to open here in a building on Second avenue, between 7th and 8th streets, under the direction of the H. & A. Wood Products Co., just organized with a capital of \$50,000. Wooden toys will be manufactured, and contracts have already been closed for large numbers of toy specialties. The officers of the company are: William E. Hooker, president; M. F. Albright, vice-president; Harold J. Albright, secretary-treasurer.

The machinery is now being installed, and just as soon as this installation can be completed work will begin. It is hoped to be able to operate the plant throughout the entire year.

Millions for the South Through Sweet Potato Crop

POWERFUL AID TO GENERAL PROSPERITY SEEN BY AGRICULTURAL EXPERT IN DEVELOPMENT OF SWEET POTATO RAISING AS AN INDUSTRY.

By H. E. HORTON, Agricultural Commissioner, American Steel & Wire Co.

[In sending the article herewith on the importance to the South of sweet potato raising as an industry, Dr. H. E. Horton, Agricultural Commissioner of the American Steel & Wire Co., Chicago, writes:

"Perhaps the enclosed article on the sweet potato can be used by you to the advantage of the South.

"You know the man outside the walls of the beleaguered city can sometimes tell those inside what to do. I want to see the South develop and take its rightful position in the country, and I believe the sweet potato, as an industry, may be made a powerful means to the desired end.

"As I write this letter I have before me a Macon (Ga.) dispatch, saying 'sweet potatoes sold today on the streets of Macon for 50 cents a bushel, and have dropped far below any price quoted since 1914, and to a mark below which the price has seldom gone.'

"Has an unusually large crop brought about this condition? In 1919 the production of the sweet potato was 103,579,000 bushels, and this year the production has been 105,676,000 bushels. The difference of 2,000,000 bushels will not suffice to account for the 50-cent price.

"Has the Northern market slumped? Chain stores today are selling just ordinary stock six pounds for a quarter, while for the choice stock I want on my table I must pay ten cents a pound. Has the use of the sweet potato fallen off? Not that one can see and elicit by conversation.

"Has the great number of 'curing houses,' and consequent large stocks concentrated in the South, brought about the slump in price? Perhaps.

"The probability is the marketing system has broken down and somebody has cold feet."

Dr. Horton in his article strongly presents the advantages to the South of making the sweet potato a major crop. His facts and conclusions are worthy of wide consideration.—Editor Manufacturers Record.]

The sweet potato production of the country for several years past has been as follows:

Year.	Production, bushels.	Crop value.
1909.....	59,232,000	\$41,062,000
1915.....	75,639,000	46,980,000
1916.....	70,956,000	60,141,000
1917.....	83,822,000	92,916,000
1918.....	87,924,000	118,863,000
1919.....	103,579,000	138,085,000

The bulk of this production is in the Southern States.

Just what part of the 100,000,000 bushels of sweet potatoes are used for human consumption is a question. It is known the losses due to poor storage are large, and that less than one-half of the total field run is prime table stock.

If the loss from disease be assumed as 20 per cent and the available prime quality table stock at 40 per cent, then starting with the 100,000,000 there would remain 32,000,000 bushels table stock.

It will be useful and instructive to propound a number of pertinent questions and answer them.

Can the production of prime table stock be doubled and marketed at a profit to the grower? Can the losses from disease be cut down? Can the losses from storing be cut down? Can the culls produced by the careful sorting of field run be put to profitable use?

The answer to the first question is to be found in the development of the Northern market.

Of Taste There Is No Disputing.

While the old and famous adage, "De gustibus non disputandum," is as true today as when first made, it does not seem to work full force when its subject is the sweet potato.

A 10-ounce "Nancy Hall" sweet potato, baked for 60 minutes in a slow oven and served with butter, is a viand I never saw refused. Millions of people in this country (and why not in Europe) would welcome the sweet potato on the table every month in the year.

The sweet potato is fine tasting, nutritious and easily prepared. It does not replace the Irish potato, but fits in with it.

While the sweet potato has been grown for food in this country since 1650, it is not generally used outside the South. For many years there has been a short period in the year when the sweet potato was to be had in the Northern market, and then it suddenly disappeared for a year. The reason for the periodic appearance has been due only to the impossibility of keeping the sweet potato over long periods.

The Southern Sweet Potato.

Almost every writer who has touched on the subject of marketing the sweet potato has a paragraph on what the market wants; for example, "the Northern market demands the dry-fleshed varieties."

These writers say not a word about the Northern consumer's demands, for they do not know them. We have here another instance of what is becoming more frequent each year of the dealer taking upon himself to decide what the community shall eat. Rarely, if ever, does the dealer possess unusual gastronomic taste, and he decides for products which produce him the best returns.

In the kitchen frequently there is another person deciding what shall be eaten and who often is not in position to choose for the family.

Then there is the manager of the hotel or restaurant, who is hired more for his business ability than for his knowledge of gastronomy.

It has been my observation the Northern family takes as kindly to the delicious, moist, sugary, soft variety of the sweet potato as the Southerner, provided always the potato is properly cooked and served. Give the Northerner the properly-baked Nancy Hall or Porto Rico of proper size, and he becomes enthusiastic over the viand.

To develop the country-wide market for table stock it will be necessary to place on the market attractive, uniform graded stock. It won't do to offer "Jumbos" and "Strings" in the hamper or box, for this will kill the business. The consumer will not buy a second hamper.

Losses from Disease.

The subject of losses from disease may be dismissed in a few words: These losses may be easily, surely and cheaply cut down to the point where they become negligible.

The problem of the losses from storage has been solved by the "process of curing"; it is only necessary to build storage-houses and operate them properly. So far as the keeping is concerned, the sweet potato can be placed on the market every month of the year.

A Manufacturing Industry Based on the Potato.

The sweet potato cull may be made the basis of an important manufacturing industry in the South; canned sweets, delicious table syrup, high-grade vinegar, flour, cattle feed—to mention only the principal products.

Through the labors of the well-known chemist, H. C. Gore, the industrial possibilities of the sweet potato have been greatly extended, and the following list sets forth the principle products which may be made from the potato, together with their values:

Name of product.	Value per 100 lbs. of potatoes worked.
Canned sweet potatoes.....	\$1.94
Flour.....	2.70
Syrup.....	2.25
Dried raw (feed).....	.90
Alcohol.....	1.10
Vinegar.....	8.90
"Dehydrated" (for human consumption).....	10.00

Many other products may be made from the sweet potato, but the list given comprises those of present economic importance.

Southern Livestock Industry Based on Sweet Potatoes.

The cut-over pine lands in the South will likely be developed through the growing of the sweet potato, peanut and cowpea, and this is the combination which will produce hogs at the greatest possible profit to the farmer.

The sweet potato grows well in all soils with the exception of those excessively rich in nitrogen (one of the plant foods). The potato does well on the light sands and sandy loams generally better than on stiff clays.

The South has the main condition for a great livestock industry, namely, cheap feeds. So strong is the position of the South in this respect it could easily enter Northern markets with manufactured mixed feeds.

The possibilities of the sweet potato may be brought out by comparison with corn. One acre of these crops produces the following amounts of actual dry substance: 200 bushels sweet potatoes produce 4804 pounds; 35 bushels corn produce 1752 pounds.

The sweet potato leads corn in its content of starch and sugary substances. Corn leads the sweet potato in fat and protein substances, but these substances are available in other Southern crops at very low unit cost—lower than protein and fat in corn.

Marketing the Sweet Potato.

A correspondent graphically describes the marketing problem in the following paragraph:

"One and a half cents a pound is the best the curing-houses are paying here, and they won't pay a profit to the grower. Two carloads from B— and one from I— were consigned to a commission-house in Chicago. Prices quoted were from \$2.25 to \$2.50 per crate of about 60 pounds, and netted the growers five cents per crate. One of the cars from R— has not yet been heard from—almost five weeks ago. Is it not time to organize and co-operate? Organization similar to that of the fruit growers of California will do the work."

At the time this letter was written sweet potatoes were selling in the chain stores in Chicago four pounds for a quarter, and choice stock at 10 to 12 cents a pound!

It is not likely the California idea unmodified will solve the problem of marketing, for the conditions are not comparable. The orange industry is confined to two small sections of the country. In California there is a coherence of the owners of groves that amounts to private ownership plus strong esprit de corps, that compels the owners to do certain things; they would be socially ostracised if they did not do them.

The sweet potato is successfully grown in that strip of territory known as the Coastal Plain, which stretches from Virginia to Texas, an immense area, and inhabited by many kinds of people of the most diverse interests. The marketing association idea will solve the problem, but not without hard work and experiments.

The growers of the sweet potato will have to follow in the main the well-established ways of placing any new product on the market. There must be an association of growers with a vision of possibilities of the business, willingness to study other marketing associations, courage to undertake any task in marketing, patience to wait for results and perfect confidence in the men who do the work of introduction.

Ample means must be available and be spent liberally. Will the end justify the expenditure? The answer is that the stake is new business for the South amounting easily to \$100,000,000 a year!

The Curing-House.

On every hand is heard the remark "a curing-house solves the marketing problem for the sweet potato." Nothing could be farther from the case; the curing-house is but one step in placing the sweet potato permanently on the market, and not the most important step.

What are the steps necessary to establish the sweet potato as a national viand? First, convince the Northern buyer you have something that has greater merit than what is now on the market and something that can be sold for the same price or a shade less.

Second, careful curing and grading. Third, choice of varieties. Fourth, strong marketing association.

What use can there be in saving 95 per cent or over of the sweet potato crop if it cannot be sold to advantage?

The sweet potato producers must bring their product to the Northern consumer and convince him of its superior merit. It won't do to sit back and say "our crop is ready and we will sell it f. o. b. curing-house track. We don't have to advertise it, neither do we have to follow up sales. Take it or leave it, as you please.

Old-established business is not maintained in this way, and new business certainly cannot be established in this way.

Success will lie in perfect knowledge of production of the crop, the processes of manufacture and marketing, all backed by strong men who insist the industry must succeed. Big profits will come directly, and bigger profits indirectly, through the increase in land values due to the increased production of crops and livestock. The possibilities are sketched on this page.

Production of Naval Stores in 1920.

[From Raleigh (N. C.) Times.]

Statistics compiled by the Bureau of Chemistry, United States Department of Agriculture, from reports by producers of turpentine and rosin indicate that there were made this season, up to August 1, 1920, about 237,000 casks of turpentine and about 712,000 round barrels (approximately 500 pounds gross) of rosin. The producers' estimates for the balance of the season indicate that there will be produced from August 1 to the close of operations about 234,000 casks of turpentine and 740,000 barrels of rosin, making a total for the season of about 471,000 casks of gum spirits of turpentine and about 1,452,000 round barrels of rosin. Wood turpentine, wood rosin and rosin reclaimed from still wastes are not included in these figures. These usually amount to about 10 per cent of the production of gum turpentine and gum rosin.

Cattle Loan Company Organized in Florida.

Jacksonville, Fla., November 27—[Special.]—The Southern Cattle Loan Co. has been organized through the co-operation of the various commercial organizations and business men to assist in the development of the cattle industry in this State. It will have a capital stock of \$500,000.

Writing to the MANUFACTURERS RECORD, George W. Chase, treasurer of the Florida Soft Phosphate & Lime Co., says: "This cattle industry movement should interest the Southeastern States and turn the attention of Northern capital this way, where we have so much available land and conditions more favorable to cattle raising than prevail in the West. The raising of cattle, followed by hogs, and cultivation of corn and cheaper fodder, should be emphasized more as a Southern industry."

\$300,000 Building Being Erected by Louisiana College.

Pineville, La., November 26—[Special.]—The Louisiana College is erecting a three-story structure, 80x230 feet, at a cost of \$300,000. It will be entirely fireproof, of reinforced concrete, hollow tile and brick, with a roof of asbestos-slate. It will have concrete and hardwood floors and a low-pressure vacuum-type heating plant, and an electrical substation will be established at a cost of \$7000.

The general contract has been awarded to John T. Willis of Jackson, Miss. R. H. Hunt Company of Dallas, Tex., is the architect.

Chicken Feed Manufacturing Plant Being Erected.

Berwick, La., November 27—[Special.]—The Oyster Products Co., a new corporation, is constructing a large plant here for the manufacture of chicken feed from crushed oyster shells. The company is also building a fleet of 30 barges to transport the shells from the shell reefs at the mouth of Atchafalaya River to the factory at Berwick.

Heretofore oyster shells have been used only for road-building purposes in this section. The development of the chicken-feed industry has raised the price so that they can no longer be used on roads with profit.

Two Large Paper Mills Under Construction Will Use Bagasse and Rice Straw in Making Finished Products.

New Iberia, La., November 26—[Special.]—Two paper mills are under construction here, one being that of the Charles Boldt Paper Mill Co., while the other is owned by the United Fiber Products Co.

The Boldt company is chartered under the laws of Ohio, with Cincinnati as headquarters. The United Fiber & Products Co. is a Baltimore, Md., corporation.

The Boldt plant was located here through the work of the Chamber of Commerce, which has been working hard for several years to make New Iberia a great paper manufacturing center because of the abundance of raw material in this territory.

Charles Boldt is a multi-millionaire. He is at the head of corporations that own several factories in this country, including glass bottle manufacturing plants and paper mills. The local Chamber of Commerce shipped several carloads of rice straw to one of the Boldt mills. Test runs were made, and it was found that the straw would produce 65 per cent of pulp to the ton.

That interested Mr. Boldt, and he came to New Iberia to make a personal investigation. As a result of his trip here he bought a tract of land connected by two railroads and Bayou Teche, thus furnishing both water and rail transportation.

Next he sent his construction engineers here with instructions to build the latest model in paper mills. The buildings are now under construction, and when completed will be thoroughly fire-proof, being built entirely out of concrete, steel and brick. Nothing in the shape of timber is being used.

The mill is scheduled to begin operations next June. It will manufacture corrugated containers, using rice straw exclusively. When in operation it will employ about 100 skilled mechanics.

The company is now buying large quantities of rice straw and storing it so as to have plenty of raw material available before the next crop of rice straw is harvested. Rice straw has heretofore been a waste product.

The plant of the United Fiber & Products Co. was constructed about three years ago by the Sugar-Cane By-Products Co., but it was never operated.

The United Fiber & Products Co. bought the mill and is now remodeling and reconstructing it. The officers of the company are Wm. T. Larkin of Baltimore, president; Cyrus F. Logan of Washington, vice-president and consulting engineer; Henry L. Brock of Baltimore, treasurer, and Samuel P. Bowers of Philadelphia, secretary.

The mill will manufacture container boarding, using sugar-cane bagasse and rice straw in the process. Later other units will be added and other grades of paper will be made, including wrapping and book paper.

The plant is located on a 17-acre tract of land, almost in the heart of New Iberia, and has both water and rail transportation facilities. It is said that when finished the mill will represent an investment of about \$1,500,000.

Perhaps the largest forest of willows in the world is located near this place. The willow is a fast-growing tree that "comes back" as fast as used. Experiments have demonstrated that willows will make a good grade of paper. The company is investigating this source of supply with the view to utilizing it in one of the units of the mill.

Automobile 'Bus Company Incorporated.

Incorporation of the Shore Transit Company, with authorized capital stock of \$75,000, is announced at Salisbury, Md., the incorporators being A. M. Jackson, Mark Cooper and B. J. Jackson, all of Salisbury. Harry B. Wolf, attorney-at-law, Baltimore, is also interested, according to the announcement, and represents interests which propose to operate passenger omnibuses from Elkton, Md., on the main highway between Baltimore and Philadelphia, down the Eastern Shore of Maryland to Salisbury, about 125 miles, with a branch route from Chestertown to connect with the ferry from Bay Shore to Rock Hall, and another branch from Easton to Claiborne, to connect with the ferry from Annapolis. It is also contemplated to handle freight to some extent as well as mail and parcel post matter.

New Orleans Selected as Site for Harvester Company Plant After Careful Investigation.

Supplementing the announcement in the MANUFACTURERS RECORD last week relative to the erection of a factory and export warehouse in New Orleans, the secretary and treasurer of the International Harvester Co., Chicago, advises that the only immediate investment is the purchase of the land, and that plans for the extent of the development and the time for beginning work have not yet been made. The matter of contracts for improvements will not be taken up until later.

A statement from Harold F. McCormick, president of the Harvester company, concerning this purchase and the reasons for it, follows:

"Our selection of this site for the extension of the company's binder twine manufacturing and shipping facilities was made after a careful survey of several suggested locations. This choice was determined by the all-around suitability of the New Orleans site with regard to the special requirements of our business. It appeared to us to be the best fitted to our needs, not only in an economic sense and on account of local conditions and advantages, but with relation to our other twine mills.

"One of the major reasons for seeking a twine mill site near the Gulf was the fact that the principal raw material used in making binder twine for American and foreign consumption is Yucatan sisal. Heretofore large quantities of this fiber have been brought in through Gulf ports and hauled by rail to the Harvester twine factories at Chicago and St. Paul, and then the twine for use in the South and Southwest, in countries south of the equator and in Southern Europe has been hauled back over a considerable portion of the route already traversed by the raw material—an economic waste and expense which the New Orleans plant will enable us to avoid.

"At the same time we have had in mind the desirability of such a storage and shipping base for the better distribution of all our line of agricultural implements used in the South and Southwest and exported to countries along and below the equator and to Southern Europe.

"It is not possible at this time to state exactly when construction will begin upon the New Orleans site or how extensive the first units of the plant will be. However, it is our desire to utilize this very fortunately situated property as soon and as fully as possible."

The Economy of Motor Trailers.

Lee Loader & Body Co.

Chicago, Ill., November 10.

Editor Manufacturers Record:

In a recent issue of your paper appears an item entitled "Motor Trucks Will Help Move Crops," which says that numerous motor truck manufacturers were consulted recently concerning the transportation problem, etc. Among the remarks made by Mr. E. A. Williams, Jr., president of the Garford Motor Truck Co., Lima, O., there appears the sentence: "In many sections farmers can haul their produce by motor truck to the railroads, preventing the tie-up of railroad rolling stock and avoiding congestion and busy shipping centers."

Will you please say for us and for the various trailer manufacturers of America that the necessity for greater economy in business, and this includes the farmers' business also, due to falling prices, will force more favorable consideration of the trailer for its economy in haulage as well as the lower initial investment?

Bankers should realize the vital importance of transportation to the farmer, the merchant and the manufacturer. They can be made to see that the cost of haulage can be reduced and better profits earned by speeding up deliveries, thereby increasing the activity and prosperity of local communities wherever trailers are used.

We thought you might like to have these things brought to your attention again, as there is a danger of the importance of the trailer being lost sight of unless the truck user proves to himself the usefulness of a trailer by investing in one or more.

LEE TRAILER & BODY CO.,

H. G. FLETCHER, Assistant Sales Manager.

Commercial Apple Orchards on Large Scale Declared Feasible for East Tennessee Section

UNIVERSITY HORTICULTURIST DEMONSTRATES POSSIBILITIES BY DEVELOPING FIELD OF OLD NEGLECTED TREES INTO PROFITABLE ORCHARD.

By CARLOS C. CAMPBELL.

As an experiment, Prof. Oscar M. Watson, horticulturist of the University of Tennessee, at Knoxville, has taken a 25-acre tract of old, neglected apple trees and within four years has developed a thrifty, mighty profitable orchard. Primarily, this work was undertaken to demonstrate the possibilities of developing a large commercial apple section in East Tennessee.

For several years Professor Watson has been preaching "better fruit" to his students at Knoxville, the home of Tennessee's splendid State university. He had told them about the wonderful results, financial and otherwise, which could be secured by scientifically caring for even the small home orchards, as well as the larger commercial orchards.

Then Professor Watson decided to pave the way. In 1916, while on a fishing trip in the beautiful Smoky Mountains of Sevier county, near Knoxville, he saw an old, badly dilapidated apple orchard. Realizing that he had found a golden opportunity to drive home the lesson in commercial fruit growing in East Tennessee to his students, the practical horticulturist lost no time in purchasing the 25-acre orchard and an additional 175 acres of land adjoining the orchard.

This transaction marked the beginning of an entirely new method of teaching horticulture at the University of Tennessee. A number of the horticultural students spend considerable time on this farm, which was soon designated "Unaka Farm." Here they saw and practiced the latest approved scientific methods of pruning old trees. Most of the trees in the orchard were over 40 years old and had never been pruned or in any way cared for since they were planted. It is easy to see, therefore, that the students got plenty of valuable information concerning this very important work.

The first task was to cut out all dead or diseased limbs. The living limbs were then thinned and pruned, so that no two limbs would rub each other, and so that the sunlight could easily pene-

trate the interior, as well as the exterior, of the trees. Where limbs one-half an inch thick in diameter or larger were removed, the stubs were scientifically treated, in order that no damage would result to the tree. All removed limbs were then carried outside the orchard and burned, thus destroying thousands, or possibly millions, of injurious insects and pests, and also eliminating a choice breeding place for additional pests.

In this manner the trees were put in first-class condition. The next step was to protect them from future damage. The trees were thoroughly sprayed for this purpose. Not only were they sprayed during the winter, to kill any remaining insects and prevent the coming of others, but the spraying was kept up during the summer, thus protecting the apples on up to harvest time.

Thus Unaka Farm was transformed from a field of worthless and unattractive trees, each matted with little twigs, much too small to carry even medium-sized fruit, into a stately orchard of graceful trees, bearing many bushels of highest-quality fruit, and adding to the natural grandeur of the foothills of the Smoky Mountains. It is a genuine inspiration to see these trees at harvest time, when they are filled almost to the breaking point with large, firm and delicious apples. Real quality is now the outstanding feature of the orchard, from the appearance of the trees to the harvested fruit. The strength of the trees is concentrated on production of high-grade fruit instead of feeding masses of worthless limbs and foliage.

The result was almost unbelievable. The entire orchard had yielded the previous owner less than \$200 (gross) in 1916. The ground was literally covered with small, knotty, wormy and otherwise faulty fruit. "Black rot" and other diseases had attacked the apples long before they were matured. Very few sound apples could be found in the entire orchard.

In 1917, the first summer after Professor Watson had acquired and rejuvenated the orchard, the yield was a little over 1200



ONE SIDE OF PROF. O. M. WATSON'S ATTRACTIVE APPLE EXHIBIT RECENTLY SHOWN AT THE EAST TENNESSEE DIVISION FAIR, KNOXVILLE, TENN. ONE HUNDRED AND SEVENTY-FIVE BUSHEL OF CHOICE APPLES WERE USED IN BOTH SIDES OF THIS PRIZE-WINNING EXHIBIT.

bushels of good-quality apples. These were free from worms, scale or rot, and the size and shape, as well as the flavor, bore evidence of the good work which had been put on the orchard the previous months.

These apples were marketed exclusively in Knoxville, only 43 miles from the orchard. They were delivered in large motor trucks. Although scores of unsolicited orders, some for carload lots, have been received by Professor Watson from all parts of the South, the local demand has been so great that no shipments could be made. Knoxville dealers, including the best retail grocers and the fruit stores, sell these apples in preference to Western fruit, which they had formerly sold in large quantities. Unaka apples are also sold from a wagon located on Market Square, the location of Knoxville's exceptionally fine municipal market. This market is recognized far and wide as being the best and most complete market south of Baltimore.

On the rejuvenated orchard the new owner kept working diligently for the further development of the farm. He spared neither time nor money in the work. While much of the work was done by University of Tennessee students, they were well paid for their efforts, as they received the prevailing wages, in addition to the more valuable consideration—that of securing first-hand knowledge about the scientific care of orchards. After seeing the development of this farm, they began to realize that the rich agricultural section surrounding Knoxville could be made into one of the nation's best apple-growing sections, as well as being a livestock center and a favored section for the culture of strawberries, grains, hay, sweet potatoes, etc. They had, of course, been familiar with the fact that East Tennessee enjoys an ideal mid-southern climate, with an unusually long growing season, and with an annual rainfall of 50 inches, but they were just learning that these conditions were ideal for apple growing on a commercial basis.

In 1918 they saw Unaka Farm produce 2300 bushels of apples, the quality of which showed a further improvement over that of the previous year's crop. An unusually late freeze was experienced in the high foothill section, but not in the valleys below this farm, which killed the entire crop in 1919. The 1920 crop, however, was a record-breaker. Almost 5000 bushels have already been gathered, and the harvesting is still going on.

Professor Watson points with justifiable pride to the fact that he has already realized a net profit of over \$8000. This is especially pleasing to him because of the fact that it was made from only three crops, and after deducting all expenses of rejuvenating the orchard. He will not even venture a guess as to what the annual profits will be in future years.

There are only 700 trees bearing at this time, these occupying the original 25 acres. Professor Watson has already set out 2500 young trees, which will soon be bearing, and will this winter put out another 2000 trees. Additional acreage will be given over to the orchard each year until the entire 200 acres are in apples. He then plans to secure more land adjoining Unaka Farm for still further expansion of the highly-profitable enterprise.

Unaka apples won highest honors at the State Fair at Nashville, at the Tri-State Fair at Memphis and at the East Tennessee Division Fair at Knoxville, the only fairs at which they have been exhibited. The exhibit at the Knoxville fair, a photograph of which is printed in connection with this article, was acknowledged to be the one best exhibit of any kind in the entire fair. One hundred and seventy-five bushels of extra choice apples were arranged in the shape of a plain house top, occupying the center of the large agricultural building. The exhibit was 33 feet long, and had a large sign along the top. The name "Unaka" was worked in with green-colored apples on both sides of the exhibit. The remainder of the exhibit was of red apples.

Professor Watson stated that it is his intention to prove conclusively that no State in the Union can grow better apples than can be grown in the mountainous sections of East Tennessee, and that they can be grown in this section with a big success financially. Many farmers have already been interested in scientific apple growing, through the efforts of Professor Watson. Also, it is interesting to note that the price of land in the immediate vicinity of Unaka Farm has more than doubled since this commercial orchard has been developed.

"All of which goes to prove that it is infinitely better to teach by practical demonstration than by lecturing from textbooks,"

commented Oscar Watson, as he finished relating a brief history of his splendid accomplishment. "And the best part of it is that any man, with only a grammar-school education, or even if he can merely read, can easily carry out the instructions. As a matter of fact, much of my demonstration work was carried on by common labor, with no technical man present."

\$150,000 Hospital Fast Nearing Completion.

Gastonja, N. C., November 27—[Special.]—The North Carolina Orthopedic Hospital being erected here is about two-thirds complete, and it is hoped to be able to receive persons about the middle of next year. Contracts for the hospital and school were awarded last December, and work has been progressing steadily. The buildings, without equipment, will cost about \$150,000 and will be of fireproof construction, with cement and tile floors. The roof will be of green tile, and the building will be heated by steam and lighted by electricity. J. H. Deal has the general contract, and Wm. H. Peeps of Charlotte, N. C., was the architect.

This will be one of the best institutions of its kind in the country, and will care for crippled children.

Pearl Fishing and Mussel Shell Industry of Texas Has Romantic Side as Well as Profitable Outcome.

Paint Rock, Tex., November 24—[Special.]—Revival on an extensive scale of the pearl fishing and mussel-shell industry on the Concho River has taken place during the last few weeks. Several expeditions of professional pearl hunters are now scattered along the stream, where they establish camps while searching for pearls. Some gems of wonderful beauty and high value have been obtained, but it has been found that the most profitable financial returns come from the sale of the shells. One large Northern button-manufacturing plant sent a force of mussel-shell gatherers to the Concho River recently, and they have already taken big quantities of the shells from the stream. These have been shipped to the plant, and will be converted into pearl buttons. While the primary object of this expedition was to obtain the shells, a large number of fine pearls were obtained from the bivalves.

It is stated that the Concho River has been for many years the largest pearl-producing stream in the United States. Its freshwater pearls are widely known for their quality and lustre. They are in such demand by the trade that the camps of the collectors are visited frequently by buyers from New York and other cities.

Interesting incidents of unusually valuable finds have been reported from time to time. One of the notable cases of this kind occurred a few years ago, when Clarence Talbot, a young sheepherder employed on a ranch near here, found a pearl in a mussel which he took from a quiet pool in the Concho River while lounging along that stream one hot summer afternoon. This gem was of such unusual size and perfectness that the young man sold it for \$6000. He used part of this money in obtaining an education, and the remainder he invested in oil-land leases in localities of the State where great petroleum development has since taken place. He made a big fortune out of these investments, and now owns a large and well-stocked ranch in West Texas, besides being the possessor of other valuable property.

Pearl hunting is a favorite pastime with the children of the ranchmen of this section. It is a profitable business when conducted systematically, and it has often yielded pin money to the young men and women who engage in the search for the fun of it. During the summer season, especially, pearl-fishing camps may be seen all along the banks of the Concho River. It has often happened that collections amounting to many thousands of dollars are gathered during a period of a few weeks. On the other hand, a whole season may be spent in almost fruitless search for pearls. The men who open the bivalves are experts at the business. The search for the gem that may be hidden within the shell is deftly and quickly made. The opened shells are piled upon the bank and then sorted for shipment to button factories.

Although the Concho River is the principal pearl-producing stream in Texas, these gems are found in considerable numbers in Caddo Lake, in Eastern Texas, where in some years pearls to the value of several hundred thousand dollars have been gathered.

Why I Am Opposed to the League of Nations

By REV. W. O. CARVER, D.D., Professor in Southern Baptist Theological Séminary, Louisville, Ky.

It is to be noted that it is *The League* that I am stating my objections to. Very few Americans are opposed to the principle of a League of Nations, and most of us hope to see a league organized and in operation. My opposition to this League is not political nor recent. As soon as it was published, I wrote my father: "Mr. Wilson will never get his Treaty and League adopted without modifications, and he ought not." Normally and usually, my party affiliations are with the party now seeking the adoption of this League. Because of the limitations of time, I will state only the outstanding objections which cause me to oppose the adoption, and these, in general terms, with the least possible elaboration. For convenience, I summarize my objections under three general objections.

I.

I do not believe that America can properly fulfill her duty to humanity in such a League as is provided for in the Versailles Covenant. It has been my business and my delight for 20 years to study humanity and the various nations from the standpoint of God's purpose for the whole race. I have studied, as best I might, the use which God has made of the separate peoples in the interest of the salvation and development of the whole of humanity. I am a firm believer in the divine calling of the American people. I believe that God as truly called our nation as He did the Hebrew people. I believe that His purpose with us was that we should here develop the ideals of free government, of democracy, and that through us this blessing should be given to all the peoples of the world. For me America is God's prophet of democratic freedom in politics and in religion to the human race. I believe that we can better discharge this function and so better serve the world if we shall not entangle ourselves in such a combination as will hamper the freedom of our message and obscure the light of our ideals. We have made great progress in the ideals which it has been given to us to propagate, but we have not yet brought them to completion, nor have we established them securely in practice. The world has been attracted by the light that has risen upon us, but its peoples have not yet come to the brightness of that rising. The ideal in a general way has gripped the race. In many lands some progress has been made toward the realization of the ideal. But genuine democracy has come into effect in none of the nations now banded and proposed to be bound together in this League. Now, this League provides that all the international policies of all its members shall be determined by the decisions of its council. This council is to be made up of nations that do not accept and do not understand the genius of democracy. The effect will be that just at the time when we have, first of all, come to play a great part in the life of the world, and when we have come to that time when we could most rapidly and effectively deliver our prophetic message to mankind, we would be placed in a position that would hinder our freedom of expression, and thereby delay the democratizing of the world.

I believe profoundly in the divine calling of the Baptists to deliver to the Christian world and to all humanity the message which it has been given us to conceive and which makes us a distinct people among Christians. For this reason, I was opposed to our entering the abortive Interchurch World Movement. I am not opposed to all co-operation. I am very far from wishing to see hostility among the "churches." But to me it seemed that it would not be possible for us to enter such a movement as that which was undertaken without obscuring our message and blunting the edge of our testimony. We had to remain out, not from narrow selfishness or bigoted indifference, but in order to preserve for all Christians the priceless heritage of our distinctive message to the world.

Similarly I have felt about my nation and this League of Nations. We cannot go into it as drawn without retarding the progress of the world in freedom.

II.

I am opposed to this League because it fixes the control of the whole world in the hands of a few nations, which at the moment

happened to be "the great powers." I have been amazed, as I have made a fresh study of this Covenant, at the skill with which it makes impossible the exercise of any power or the promotion of any progress, except as these shall serve the ends determined by these few nations. At every vital point in the Covenant, all decisive power at every point where any real issue is involved, the council is made supreme. By the provision of unanimity for any action of the Council, and by withholding from the Assembly all decisive power at every point where any real issue is involved, it is made impossible for any action to be taken without the consent of all the powers represented in the Council.

If we look at the constitution of this Council, the significance of this becomes appalling. There are to be nine members. Five of them are designated, and these must be permanently represented on the Council. By vote of the Assembly and Council, any one or more of the remaining four may be made permanent also. In the selection of the four not yet fixed the veto vote of any one Council member may prevent the selection for the Council, no matter how many of the members of the Assembly may vote in favor. Of the five permanent members, three are European, and of the four others thus far chosen, three are also European. Thus six members of the all-powerful Council are European. Europe holds less than one-fourth of the world's population, and yet has a predominating control of the world in the provisions of this League, which we are told is the charter of human freedom.

The provisions of this League thus further serve to fix a status quo, and so to hinder the free and normal development of nations and of human life. The boundaries of no nation can be changed without the consent of the Council. No matter how righteous and just might appear some readjustment of boundaries, so long as an element in one nation so affected could be induced to carry the matter before the League the change would require the unanimous vote of the Council before any change could be made. Can anyone think that as now constituted the decisions of this Council would be made solely in the interest of "the self-determination of peoples"? Confessedly, some of the very provisions of the Treaty as to boundaries which are to be the base from which all decisions are hereafter to be made were reached not in the interest of the peoples themselves, but of the "larger policies" of the powers making the Treaty. With a Council two-thirds of whose members are representatives of European powers, he is surely a wild idealist who could think that such a Council, sitting in Europe, would decide all questions in the interest of humanity, and not in the interest of European politics.

Let us illustrate how difficult it will be to right obvious wrongs by the case of China. Japan took advantage of the war to get a strangle hold on Shantung. In the Peace Conference Japan refused to release this hold at the time, but promised to do so later, in her own judgment. We are told that once the League is at work China may bring this case before the Council. But what would then be the situation? Just so long as Japan could find one member of the Council to vote "no," China could not have her province restored. How many different influences might be used to procure that one negative vote?

III.

I am opposed to the League because it, notwithstanding all the denial, does establish a super-state with its capital in Europe. No sort of special pleading can for me obviate that fact. This League places in the power of the super body the decisions of peace and war, and in the Council of the League the decision of where and how we are to employ our military and naval forces. Of course, I do not hold that this would be done without a vote of Congress. That would be impossible. But the decisions of this Council would be morally obligatory on us, and the whole scheme would be meaningless if this were not so. Have we not just been experiencing 12 months of insistent demand that we are under the most binding moral obligation to accept the decisions of the Conference that devised this League, and that Congress has no moral, or even constitutional, right to reject the agree-

ments of America's representative (for we had but one) in that Conference? If once we accepted this principle and went into this League, how could we ever again say that we had any moral right to reject its recommendations in a critical situation? Of course, Congress would still have to vote, but its action would be purely pro forma, and not deliberative. This League in international matters would change the function of our Congress from a deliberative body to determine and give effect to our American convictions and reduce its action to validating decrees for the carrying out of decisions reached by an autocratic Council sitting in Europe.

How very true this is is well illustrated by the outcome of the recent issue of veracity between Senator Spencer and President Wilson. The version of the speech of Mr. Wilson given out from the White House as authoritative, although not quite satisfying to Mr. Spencer and his friends, still sustains most fully the point I am making. According to this statement, Mr. Wilson did not "promise" the representatives of Roumania and Serbia that the armies and navies of the United States would be sent to protect their boundaries and to enforce the decisions of the League. No, he did not put it as a "promise," but, according to this officially promulgated report, he did what is far more significant and dangerous. He spoke on the unquestioned assumption that the army and navy would be at the disposal of the League for the enforcement of its decisions. Mr. Wilson's promise might mean little or much, as the issue might prove. What does really count is that Mr. Wilson assumed, and rightly assumed, that the moral obligation would guarantee that America would fulfill the decisions of the League Council. It is because we cannot thus blindly commit ourselves to obey the mandates of a superior body that America will not enter this League as provided for in this Covenant.

We are told that it is unthinkable that the United States should refuse to take part in so noble an undertaking as a League to prevent war. And if mention is made of some other League or agreement, we are told that it must be this or none, and that if we do not go in now, we shall soon be standing, hat in hand, humbly begging to be let in when we will have lost our influence. As to this, two or three reflections may be pertinent.

In the first place, let us remind ourselves that all during the war we were saying that, horrible as war is, there are some things that are worse. That is still true after the war is over. Let us not lose our heroism. For, in the next place, we have to remind ourselves that this particular League was born of fear and dread, and was drawn in the lurid haze of the smoldering ruins of the awful tragedy. It was drawn hardly the blood-filled trenches of France and Belgium. In a word, it is the product of fear and horror, not of hope and trust. It represents the fear and distrust of humanity, not in its brotherhood and sympathy. Before we can have a League that can work, and work righteously, we must have one drawn under other circumstances and prompted by other ideals and emotions.

And America will have a share in it, never fear. If we are half as important to an effective League as the proponents and protagonists of this League have told us, and as we all believe, we shall have no trouble to get in, and we shall get in on our own terms. But they will be terms dictated by the American conscience, and not be the exigencies of a political campaign.

Powder Plant Purchase Concluded.

Nashville, Tenn., November 27—[Special.]—The "Old Hickory" powder plant at Jacksonville, about 15 miles from here, was formally sold to the Nashville Industrial Corporation on Friday last by the United States War Department, the consideration being \$3,505,000. It means that one of the largest war-time projects will not be "junked" and the establishment of a permanent industrial development here which will aid the future growth of this section.

The plan of the corporation does not call for junking any portion of the plant, but will aim to develop every part of it. Only large corporations with ample funds to continue permanently in business will be considered when the various units are offered for sale. Every effort will be made to dispose of the units in large

blocks to individual corporations, rather than to sell many corporations a few units each.

For more than a month requests for space have been coming into the office of the corporation, and Northern firms whose plans call for expansion in the South, where they can get the necessary raw materials without depending to such a large extent upon transportation facilities, have sent representatives to the city to investigate conditions.

The excellent housing facilities provided for a city of some 30,000 people are attracting many concerns that have experienced difficulty elsewhere in obtaining and retaining labor. Every city convenience is provided.

It is believed that manufacturers of sulphuric acid will be the first to locate in the new development, since the equipment is complete and ready to operate. Likewise, manufacturers of prepared roofing will find excellent facilities and plenty of materials available.

In addition, hundreds of thousands of dollars' worth of miscellaneous surplus equipment will be offered for sale. Iron castings, scores of miles of railroad track and similar materials will be disposed of. It is planned to sell these supplies quickly to prevent delay in turning over units to purchasers who might otherwise find them crowded with materials of every description.

Texas Town Needs Ice Factory.

Referring to the possibilities for ice manufacturing in the Iowa Park district, John N. Swanson, field superintendent of the Amalgamated Oil & Refining Co., Iowa Park, Tex., writes to the MANUFACTURERS RECORD:

"Iowa Park is a town of about 3000 inhabitants, and is principally supported, in a business way, by the numerous oil fields scattered around a radius of 15 miles. So far, we have to ship in all ice consumed, and it is retailed at \$1 per 100 lbs. I have been requested to investigate the ice-making proposition and ascertain what it would cost to equip an ice plant suitable for a town the size of Iowa Park, and in addition to have an outlet to take care of the business that would come from these oil fields. I have no idea what capacity plant would be decided on—a matter that would come up later on. I would like to get the names of manufacturers who make a specialty of machinery for small ice plants."

Beaumont Shipyard Busy Repairing and Building Ships.

Beaumont, Tex., November 29—[Special.]—The Beaumont Shipbuilding & Dry Dock Co., which has a plant on an island opposite the city, is busily engaged in repair and construction work, and a large force of men is employed. The plant has recently been enlarged and provision made for repairing steel as well as wooden vessels. A number of barges and other small craft are being built for private account.

It is probable that the company will be called upon to convert a number of Ferris type wooden ships into oil barges, and this work will keep the plant busy for many months. Shipbuilding, instead of being suspended with the close of war-time activities, promises to become an important local industry.

Rice Association Helps Steady Market.

Crowley, La., November 26—[Special.]—Rice farmers of Louisiana and Texas recently organized the Southwestern Rice Growers' Association to protect themselves from any further slump in prices of that product. Prices of rice have declined more than 50 per cent, and the farmers find themselves confronted by a serious situation. Their crops were produced with high-priced labor and implements, and they are facing losses, unless the distribution of the crop is handled in a way to prevent a further drop in prices.

As a result of the combination of farmers, all rice is now being milled on a toll basis and stored in bonded warehouses. This has had a steadying effect on the market, and no decline has occurred since the association was formed.

The Homely Wisdom of Fuller E. Callaway

THE STORY OF A WONDERFUL SOUTHERNER WHOSE HUMAN INSIGHT IN BUSINESS IS SOMETHING LIKE THAT WHICH LINCOLN HAD IN PUBLIC AFFAIRS.

By HELEN CHRISTINE BENNETT in American Magazine.

[Notwithstanding all that Southern men have achieved in the last half century, as well as what the business leaders of the Old South achieved prior to 1860—and in some respects the South's business leaders of ante-bellum days were the ablest business men in this country and made the greatest business achievements of the first half of the nineteenth century—there are still many people who yet look upon the South as a land lacking in great business leaders.

Mr. Fuller E. Callaway is one of the business geniuses of the present generation of the South. Other men in the South have accomplished as much as Mr. Callaway, but his life has been so unique, his homely wit and wisdom so interesting, that a story concerning him and his wonderful success in the building of cotton mills and in other activities as given in the American Magazine of October, special permission for reproduction of which has been given us, will prove of interest to readers in all parts of the country. This is not simply the success of a man, but the story of wit and wisdom as to business well worth studying, and especially by young men.—Editor Manufacturers Record.]

If you have ever heard of Lagrange, Ga., it is likely that you have heard also of Fuller E. Callaway. Callaway and Lagrange have been together ever since Callaway was born.

Lagrange wasn't much of a place then, just a little country town with few people and the general prostration of enterprise that was characteristic of the South after the Civil War. Anyone looking for a business career might have thought it a very good place to get out of. But that idea never occurred to Callaway.

From the moment he sold his first dozen spools of thread to the citizens of Lagrange, to the present day, Lagrange and the country about have seemed to him simply teeming with possibilities.

Because Callaway saw these possibilities and made other people see them, Lagrange is now a hustling modern small city. Prosperous people walk its streets, patronize its stores and deposit their savings in its flourishing banks. On its outskirts is growing an addition, known as Southwest Lagrange, where several thousand attractive new spic-and-span homes, surrounded by gardens of flowers, house the additional workers whom Callaway has called recently to the town.

Within a hundred miles of Lagrange are all the Callaway enterprises—23 different businesses. They include the Unity Cotton Mills, the Unity Spinning Mills, the Elm City Cotton Mills, the Milstead Manufacturing Co., the Manchester Cotton Mills, the Hillside Cotton Mills, the Valley Waste Mills, the Security Warehouse Co., the Lagrange Insurance Agency, the Lagrange Development Co., the Electric Ginnery, the Callaway Development Co., the Manchester Development Co., Callaway's Department Stores, interests in three banks, etc.

But even that list brings no real concept of the extent of Callaway's activities. The industries are there, giving employment to almost 9000 people. But, in addition to the industries, Callaway has had to build houses, churches, Y. M. C. A.'s, Y. W. C. A.'s, a hotel for men and a hotel for women, hospitals, schools, stores, greenhouses, gardens, as well as to run a newspaper and a number of other activities.

"Callaway, you are a great philanthropist! * * * Do you know that?"

"Philanthropist—nothing!" said Callaway. "It's business."

According to Callaway, his employees stay at the mills because they are happy and busy and making good wages.

"They stay longer because of the greenhouses," he asserts.

"Get a woman interested in plants, and she won't let her husband leave a place where they will help her take care of them."

One thing is certain—they do stay. The labor turnover in the Callaway mills is so small that no one sits up nights worrying about it. No one deliberately plans to reduce it. What everyone is taught to plan is to meet every need of the employees as that need grows. No one employed in the Callaway mills has to accept a single advantage they offer. He can live in a house of his own making or choosing and send his children to such churches and schools and recreation grounds as he sees fit. The advantages are there if he wants to make use of them. Ninety per cent of the workers do.

Callaway says the main reason for his success is that he liked what he was doing better than anything else in the world. He has a lot of subsidiary reasons which we will come to by and by, but he insists that this is the main one: that liking carried him

forward; it gave him his first start. He was the fourteenth child of a Baptist clergyman, and there were three others younger than he. In such a big family he had to take care of himself a good deal, and before he was 10 he was "tradin'" in real earnest. He would accumulate a few pennies, go to a store and invest in a half-dozen spools of thread and peddle these at a slightly higher price. When he was 18 he decided he knew enough to go into business, so he borrowed \$500 from an older brother and prepared to open a 5 and 10-cent store.

"That was the only kind of store I could think of that could make good on \$500," he said, with a laugh. "I reckoned I could pay cash and sell for cash, and keep quite some goods on \$500 in fives and tens."

He brought to that "five and ten" the enthusiasm he has brought to every other enterprise—the enthusiasm he deems the primary essential to success.

"You've just got to love what you're doing," he insists. "I remember old Jim Stevens, who used to go on boating parties on the river in the days when Georgia didn't know prohibition. They tell a tale of Jim sitting out there on the bank one night when the moon was low and humming to himself. Everybody in the party was pretty well bamfooled, and old Jim was happier than a king. Suddenly he raised his head and said, solemnly: 'Boys, I'd rather be doin' what we're doin' than anything else in the world!'"

"I kept that saying of old Jim, because you've got to love your work just like some men love booze, better than anything else in the world, if you want to make a big success."

Callaway called the five and ten "Callaway's Mammoth Five and Ten-Cent Store," and on the opening day he stationed negro boys along the street, each armed with a tin pan and an iron rod for banging it. The boys banged and led the crowd to the store. Then they went out for a new crowd.

"Desire is the motive power for success," he said, "and I reckon nobody knows just how much I desired that store to succeed."

"When I was a boy, a certain farmer in our parts lost his cow. He came down to the general store—the common meeting-place of the males in our town, where they sat on cracker boxes and molasses barrels to talk over the latest in world events and political caucuses—and he offered \$5 to anyone, man or boy, who would find and bring in his cow. There was a half-wit sitting there, a boy named Bill. Bill looked up right quick.

"'Mistah Jones,' he said, eagerly, 'you-all goin' to give me \$5 ef I git that cow?'"

"When Jones said he sure would, Bill got up and went out. Half an hour or so later he came back, leading Mr. Jones' cow. He got the \$5, and then Jones asked, curiously:

"'Say, Bill, will you tell me how you found her?'"

"Well, said Bill, 'I wanted that \$5 wors'n anything. I ain't never hed \$5 in my life. So I went away from here and set down on a box and put my head in my hands and tried to think ef I was a cow in your yard what I would do when I run away. I knowed ef I was a cow I'd want grass, fresh, tender, green grass. Then I begun thinkin' of all the grass about and which was the tenderest. Then I remembered that yander over beyant the woods there was a stretch of late grass that was greener'n any

grass about here. Says I to myself, "Ef I was a cow I'd go there." And I went, and she had.'

"Bill the half-wit wanted that \$5 more than anything he had ever wanted in his life. It helped him to think right. That's the kind of desire that moves to success."

The first year Callaway made \$1600 in his 5 and 10-cent store. Then he decided that the store was prosperous enough to cut off the word "Mammoth," and it became "Callaway's Five and Ten-Cent Store."

"I used to go up to New York to buy, those days," he said. "And I always went into Woolworth's store on Sixth avenue to see what Woolworth had. Woolworth only had one store then in New York, but I could see that he would have more. But what I couldn't see was how I was to have more in Lagrange! It was only a little town. It looked as if I'd have to grow some other way. So I started Callaway's Department Store."

"People have a notion that most of us men who have succeeded in doing something sat down on a shingle and reckoned the whole thing out. Now, the truth is, hardly anybody sees very far ahead. If everybody saw far ahead, nobody could get ahead of the other fellow. I didn't see cotton mills when I opened that five and ten—I was too busy thinking of the five and ten. You can generally see just a little ahead, and that's all you need to see. If you are as busy as you ought to be, that's all you have time to look at. Most of the big men in this country never stopped to think out where they intended to wind up. They were too busy doing the winding."

"Life is just like a ball of yarn: You begin winding, and it's mighty hard to get it in shape at first. It runs all askew and crooked, seemingly. But after a bit, if you keep on winding, you find you have something that begins to look as if it might some time be a ball. Then it gets bigger and bigger, and you begin to roll faster and faster, and soon it doesn't take near as much trouble as it did at first. Then it gets so big you hardly know you are winding—and you've got your ball!"

"My stores were just the beginning of the winding. I didn't know it then. I was too busy keeping on."

When Callaway had been in business two years he married. He was just 20, and Mrs. Callaway was 18. As this is not a personal, but a business tale, I might omit the marriage except that Callaway insists that it was one of the momentous steps in his career.

"A married man is worth more to me any day than a single one," he says. "In the mills, or in the offices, or as an executive, the married man is worth more. If he has four or five children he is worth still more."

"One day I met a man on the street who stopped me and said, 'Callaway, I hear you made a million in cotton. I congratulate you.'"

"Well, I said, 'it may be true I made a million in cotton. But I want to tell you why I made it. It was because my wife was willing and happy to live 17 years on Cash street when we could afford to live on Mortgage avenue.'"

"That statement is true. My wife was a girl who'd had everything a girl wants to make her comfortable and happy. We began trading the first week we were married. After the rent was paid I gave her \$6.25 a week to cover everything else. She made it stretch. I called the little street we live on 'Cash street,' because no one would give credit to people who lived on it. And I called the big street around the corner 'Mortgage avenue,' because that was what it represented mainly—mortgages. That \$6.25 got raised considerably in time, but, whatever it was, she made it do, and I never heard anything about it. I never heard of servants' troubles or difficulties; that was her part, and she did it just as I did mine. Even when we could live on Mortgage avenue without a mortgage, we decided to stay on Cash street; and we stayed 17 years."

"The man who succeeds almost always spends less than he makes. I've worked with men who wanted to save, but didn't think it worth while because they could save so little. Two dollars a week didn't interest them."

"If you can't save \$2 a week, you can't save anything," I told them.

"Some of them had an idea I made what money I had in speculation. I never speculated but twice—once on meat and once on cotton. I lost both times, thank God! If I am ever so foolish

again, I aim to take it out in stocks—just so as to be fair with my money and distribute the winnings on me around. But God in his wisdom never intended us to make money that quick."

Callaway's Department Store grew. But, like the 5 and 10, one was enough for Lagrange; so Callaway looked about for something to add to the "ball of yarn." He was a born "trader"; he liked to buy and to sell, and he soon began making purchases of goods in lots, with the idea of developing into a wholesaler. It was a promising field, but Callaway had not reckoned on the indifference of his neighbors. When he tried to sell other department stores in nearby towns, the proprietors admitted that his goods were right, but stuck to old habits of buying.

"Callaway's all right enough," one man expressed it, "and the goods are all right, but I just don't care to do business with that small a man."

Callaway heard about that speech. He desired that trade pretty hard, and so he set to work to figure out how he could get it. After a time the idea came! Why not sell to yourself?

In a few weeks Callaway had under way a plan for a new store in one of the most prosperous communities nearby—one of the communities which would not trade with him. He had an idea his goods were all right, and that he could beat the other fellow in the retail trade. But he knew it wasn't going to be easy. Something more than tin pans was needed for opening day.

Balloons were new then, so Callaway arranged for a balloon ascension on the day of the opening. The people drove down from the hills to see that balloon go up. They forgot, as Callaway intended they should forget, that he was a stranger; they remembered him as the man who had given them the time of their lives, and they went in and bought his goods. Finding them a little better value than they had received before, they continued to buy. The new store was a success. A second store was started in a second community, then a third.

When the success of the third store was assured Callaway's point was won. The merchants about wanted no more competition. They had also ceased to think of Callaway as a "small" man. And the wholesale business went on with a rush. Gradually Callaway sold out all his stores, except the one at Lagrange, and put the money into his wholesale business.

"Right here," said Callaway, "I had to be mighty careful. Right here I felt the itchin' of my left hind leg for the trough."

"You know how a hog eats, don't you? He puts his front feet into the trough to get to his food. Then if the stuff is nice and good, he gets a bit heady and puts in his right hind foot. Some one comes along and pours in a pail of fresh swill, and, zip! in goes the left hind foot—and over goes the trough!"

"The hardest trial a young man is called upon to stand is a little quick prosperity. Lots of folks climb so high they can't stand it and get dizzy and fall. The biggest rock in the path of a young man is a quick prosperity—that is, quick for whatever he is. You feel the whole world going your way, and you whoop and holler and plunge in and get everything you want. Right there you want to take that left hind leg of yours out of the trough—quick!"

"It never pays to hurry on the road to success. What we need is patience and constancy. We've got a chinaberry here in the South that grows into a good-sized tree in 10 years. But it dies in 10 years more. The oaks take 50 to 100 years to grow, and they last longer than that. Don't be a chinaberry tree if you want a long career."

"No need to hurry. In raising cotton, a dry May makes successful cotton. It makes a big root growth—a big taproot that stands the summer drought well. When we have a wet May the cotton looks fine. It stands high, and its leaves are big and glossy. But the field is all full of fine grass that you cannot get at to work out, and that is sapping the life of the cotton. It has hardly any roots at all. When August comes there isn't anything there to stand the drought. Most of us don't want a dry May, but we need it to stand the drought of August."

"The chances are better now than at any time in my memory for a man to get to the top. A lot of men are going to get there—and fall off when the drought comes. America is in her prime right now. It offers any young man a far better chance than when I started, because there's no denying that you can pick more blackberries in a patch where they are thick than in one where there aren't so many blackberries. America is ten times as rich

today as when I started. The whole world is in debt to us. We are right in the middle of the best of it now."

The wholesale business took Callaway out of his home town all over the countryside. By that time his "ball of yarn" almost wound itself. He found himself questioning the farmers as to their needs, for on the farmers the prosperity of the countryside rested. Money was the first need, town gins for ginning cotton the second. Callaway took the news of these needs back to the business men of his town, and the banks began to arrange to meet them. Callaway found himself engaged in the banking business, arranging loans; in the cotton-ginning business, building and operating cotton gins; and, naturally following these two, in the warehousing business, building and operating warehouses for the storing of the ginned cotton.

"One reason men don't get ahead faster," he says, "is because most of them are content to do what everyone else is doing at that particular time. What everybody else is doing in business is, generally speaking, the poorest thing to do. My father used to tell me a tale about a boat that was sinking.

"'And everybody ran to one side, Fuller,' he would say. 'But when you get on a boat like that, you be sure to run to the other side. It isn't likely you'll drown—you know how to swim. But in times of panic it's the others that drag a fellow down. Get on the other side of the boat and you'll have a fair chance.'

"In these times of panic or of prosperity, the best thing to do is what the other fellow doesn't do. In 1914, when everyone stopped increasing their plants, we built two mills. And we have kept them busy 2 hours a day ever since. Now, when most people are building we are sitting pat. Now, when everyone is spending money, is the best time to save. Money is plentiful—there is a lot of it to save. It comes easier—and it is going to go much further by and by."

There were two mills in Lagrange when Callaway began building mills. Today he has four right in Lagrange and two others within 100 miles of the town. He considers himself an efficient cotton manufacturer. The mass of schools, churches, recreation places, hotels, houses and hospitals which he finances, in whole or in part, and which an outsider might well consider no part of the mill owner's work, he disposes of in a single sentence:

"It's a part of the business. To make my mills efficient I have got to make every man in them more interested in them than I am," he declares. "I have a living on the side; I can afford to be less interested. But the men working there ought to find their best returns and their best happiness right there.

"Any man who wants to make himself efficient must, first of all, do his immediate work right. But that isn't all, to my notion. He has got to learn all the time on side lines if he is going to get ahead. I remember one man who used to be with us. He never was a brilliant man, and when he came he was in the office on a routine job of keeping books. He had nothing to do with cotton manufacturing. His job was to keep those books. He kept the books all right; he also studied mills.

"He would go through them after hours or between busy times. At night he read up on cotton. After a time we tried him out in charge of a mill, and he made good. He got \$5000 a year then. Before long a mill nearby asked me to act as its president in an advisory capacity. I didn't want the job, and I suggested that they take this man at \$7500 a year, as I had no higher place just then in which I could use him. He went there, and today he is earning \$40,000 a year. This man, mind you, was not brilliant; he is not brilliant today, and never will be; but he made himself so far master of the work that he is indispensable.

"Don't get the notion that I think a man ought to do everything. I don't. I haven't opened a letter addressed to me in 10 years. Letting off is as important for an executive as taking on. In the tropics there grows a banyan tree which has to have its roots trimmed to make a better growth; but they must be trimmed where they won't bleed. This is one of the hardest things an executive must do—reconcile himself to not knowing thoroughly every bit of his own business, because he has to let some things go. You can make a fast-running horse poor with hard work. I have had to forbid one of our men to do certain parts of his work. He is a big man, but he won't let himself be big. He wants to do everything.

"When you have to let some one else help you do your work, do the hardest things yourself and delegate the rest. Back the man you give it to. Then don't worry.

"I never did believe worry helped work. Worry is a hindrance to work. The work that pays is joyful work. For 20 years I worked 16 hours a day and loved every minute of it. I did my best work after supper. And three minutes after I hit the bed I was asleep. It doesn't pay to worry over anything, even bad health. A little bad health can be turned to an advantage. Some people who are beastly well never amount to much. The biggest man I know in the cotton business is a man who has one lung about gone and something the matter with the other. But he is working, and his mills are working, and during years of illness he has learned how to conserve his energy until he is likely to go on a good deal longer and more effectively than men who have never learned to take care of themselves.

"Some men worry when they get into a big position for fear they cannot do all the work. There is one man in this country who believes in me. I met him on the street not long ago, and he said to me:

"'Hello, Callaway, what are you starting now?'

"'Oh, I don't know,' I said.

"'Well,' he said, grinning, 'put me down for a hundred shares.'

"That man went around the mills with me one day, and when we got through he said:

"'Man, I don't understand how you run all this!'

"'Well,' I said, 'it's like the tale of the old woman and the calf: Once an old woman had a cow and a calf. Every time she milked the cow she lifted the calf and set it to one side while she milked. Every day she lifted that calf, the calf was a bit heavier, but she never noticed. Her strength at lifting grew with the calf.'

"Desire produces energy, and exercise keeps it. Experience shows you how to use it. Men over 50 ought to stop a good share of active work and become seed gardens. We used the Greer Almanac a good deal when I was a boy; used it for crop information. Men are a good deal like the Greer Almanac used to describe the earth. 'You want plenty of humus,' the old almanac said, 'and the earth should be friable and fertile.' Now, when a man gets to be 50 he's worn out a good deal of that humus, and he isn't nearly as friable and fertile as he was. But, on the other hand, he's much easier to handle because he's in good shape. His hedges are all trimmed, his stones are all out, and he's worn pretty level. I have a notion that about this time a man ought to be promoted to a kind of emitus position in business and let in those young fellows—friable and fertile and full of humus—on a good part of the work. The older man (I'm doing it myself at 50) ought to get down to the office late, if he wants to, and play golf afternoons, and keep himself fit to help the young fellows. His best usefulness is to listen to their plans and say: 'That's good—let's try it!' or, 'Now, I wouldn't do that. I tried that 20 years back and it didn't work.'

"Lots of people have an idea that a young man isn't fitted for responsibility. It all depends. A young man who is one of a family of seven or over, who has had to milk the cow and turn the churn and mind the babies and do chores about the house, who hasn't had time for much schooling, but who has got out early into the world on his own hook, that young man is a grown man between 25 and 30, and ready for responsibilities. Other men who have been cared for all their youth, sent to college, and so on, arrive some 10 years later—between 35 and 40. If I were advising a young man who wanted to become a good business man, I would urge him to select parents of good character, but poor, and to be one of a big family. Professional men are different. They are the missionaries of life, and they have to give a good part of their lives to preparation.

"If you are an executive, you work with men. You've got to understand psychology and human nature. All through, there has been less horse sense used in getting human beings to work than there has in handling animals. When you have a pedigreed cow, a registered high-grade animal, guaranteed to give four gallons of milk a day, you know you've got to feed her well and see that she is kept clean and comfortable. If you don't, you may get a pint of milk a day instead of four gallons. And it won't be the cow's fault. More than that, you've got to treat her fairly; you can't expect four gallons of milk if you kick that cow.

"If you are working with cows, you even have to think like cows. If you are working with men you've got to think like them. And you must never expect them to do anything that isn't human."

Callaway talks to his men in allegories. He tells all of them this cow story, especially the superintendents and assistant super-

intendents. He takes great pains in selecting and training the men who are to be his executives, and he is most particular about his office boys.

"We believe a good deal in heredity in this part of the country," he says. "When we get a new office boy we look up his father and his grandfather. That office boy is an important person. Just anyone won't be a good office boy. An office boy learns more as an office boy than he does as anything else he is ever going to be, and we don't want to waste time on office boys who won't turn out big men. In the main we get them young, treat them rough, and tell them nothing. We turn them loose to learn. And then every once in so often we go outside and bring in a man some other man has trained. If an organization trains all of its own men, it breeds woody and goes to pieces because it is a thing of one idea.

"Young men usually get big-headed at some time in their career. That isn't wholly a bad thing. It shows their faith in themselves—and they are going to need that faith! But sooner or later they will have to whittle that big head down.

"It's far easier, however, to whittle down a big head than to enlarge a middle-sized head. They've got to whittle down to fit their jobs. To have joy in a work a man must fit in a square hole if he is a square man, and into a round hole if he is a round man. I'm not denying that sometimes he has rough edges he has to rub off in either event, but it is essential that he is whittling down to get into the hole that belongs to his kind of man. That is a thing that is worth waiting for and trying for, year after year—to get a place where you love to work. I wouldn't begin shaving down until I had tried pretty hard to get where I knew I'd fit. Then there are octagon-shaped men, and they have a hard time of it. There aren't many of them in this world, and there aren't many places for them. Although there are a number of square and round men who believe themselves octagons, the genuine is scarce. But a real octagon man ought to keep on trying and trying for the place he fits into. Every once in a while you hear of some man who, rather late in life, achieves a sudden and seemingly miraculous success in a few years. That is an octagon-shaped man who has been hunting his place all his life and has suddenly found it.

"But do not try to be octagon-shaped when you are square or round. That's fatal. Most boys want to be odd. They want to be curious. It is better to stay ordinary. The chances of success are much greater. Eternal vigilance is worth more than brilliancy to business. Why, 90 per cent of the failures lack just a little of being geniuses!"

Callaway does not preach to his men. He spins yarns with morals—yarns that have a laugh hidden somewhere, a laugh that Callaway and the listener can indulge in together.

"Twelve years ago," said one of the superintendents, "I had two offers—one from Mr. Callaway and the other from another cotton manufacturer. I didn't know which to take, so I went to a third man in the cotton business for advice.

"Well," said my friend, 'Mr. X is a fine fellow, but he's a hot-house man, and his roots are in a terra-cotta tub. Now, that man Callaway, he's a white oak, and you can't get to the end of his taproots.'"

Callaway's enthusiasm for his work is so great that it becomes impersonal work, something you are interested in because it is good, not because it is his. On the outskirts of the town where he has made his fortune—and a good deal of the town's fortune as well—he took over a garden. That garden had taken almost a century in the making, and the most of it was the life-work of one woman. It is a garden such as is often written of but seldom seen—a garden of wonderful trees and shrubs and flowers. There was an old house in the center of the garden, and this Callaway replaced with a palace of white stone. When he and his wife moved from "Mortgage Avenue" they came to this palace in the garden. But "Hills and Dales," as Callaway calls the place because of the rolling acres of the large farm adjoining the garden, is far more than the home of the Callaways: it is, the show place of the town—almost of the State. It is the broadest expression of the far-famed hospitality of the South. It is a center of merry-making and festivity. It is as much an expression of the man Callaway as the mills or the village surrounding them are.

"What are you going to do," I asked, "when the children of the mill operators grow up? Under the teachers they have they are going to want better homes, better wages and constantly higher standards of living. How are you going to hold on to them?"

"By giving them what they want!" said Callaway, promptly. "Of course, they are going to improve and change. They are the finest people on earth—pure Americans. We were busted down here for a time by the aftermath of the Civil War and the panic of 1873. The people were out in the hills getting a bare living out of the ground. But they are getting up again. They will get anything they want, in time."

"But will the mills stand it?"

"The mills started with nothing," replied Mr. Callaway, "and look at them now. They and I began on six spools of thread. Anyone would have said all this was impossible then. But here they are. The best foundation for a business enterprise is just to set down in your mind one phrase: Everything happens that couldn't. When you've learned that, you'll believe. I found it out as I went along."

\$1,500,000 Office Building to be Erected by Standard Oil Co.—Typical of Construction Activity Among Oil Interests of Baltimore.

The Standard Oil Co. has awarded the contract for the erection of a 15-story office building to cost \$1,500,000, to J. Henry Miller, Inc., Franklin and Eutaw streets, Baltimore, Md. The new building will be erected at the northeast corner of Courtland and Franklin streets, and will be 90x140 feet. Construction work will begin at once, and it is probable that one year will be required in which to complete the structure, which will be one of the most modern office buildings in the city. It will be entirely fireproof and be fitted with the latest equipment. It will be built of steel frame upon a concrete foundation, with a limestone exterior. The floors will be of fireproof construction, and the roof of slag, and steel sash will be used throughout.

Plans for the new structure were drawn by Clyde N. Friz, 814 Lexington Building, Baltimore. It was originally planned to make the building but six stories high, but these plans were altered and bids asked for a 10-story structure. It was finally decided to disregard these plans and to erect a 15-story building.

The awarding of this contract, and the fact that work will be started immediately is representative of other building activities in the section.

The Standard Oil Co. is also erecting extensive additions and making improvements costing hundreds of thousands of dollars to its already large refinery at Canton, and this work will be continued throughout the winter months.

At Fairfield, the Prudential Oil Corporation is engaged in a big building program. Additional units are being added to practically every branch of this company's large refinery, and tons of materials of all kinds have been accumulated to insure against any delays because of shortage of materials. All of the buildings being erected are entirely fireproof. A battery of stills, and many large steel storage tanks are going up, in addition to general extension of pipe lines and other handling facilities.

Likewise the United Asphalt Refining Co. at East Brooklyn is spending a large sum of money in increasing its facilities, and replacing storage tanks destroyed by fire some months ago. The Texas Oil Co. is also making improvements of a similar nature.

Labor is more plentiful due to slackening of efforts in some lines, and materials are more plentiful and easier to obtain than for some months, and this is stimulating building activities of many kinds. Ordinarily building projects are continued throughout the year in the vicinity with the exception of during severe cold spells, and this year the number of projects under way is very large. Operators believe that the early completion of the projects and placing them on a producing basis is of prime importance, and hence everything will be done to prevent any delay in completion of industrial plants and building operations that are now well advanced toward completion.

European Notes: Political and Economic

LLOYD GEORGE, SOLE SURVIVOR AMONG WAR ADMINISTRATORS, EXPECTED TO BE CONTINUED IN POWER—MONARCHICAL LEANINGS EVIDENT IN GERMANY—DIFFICULTIES IN THE WAY OF IRISH INDEPENDENCE.

By EDWIN C. ECKEL.
VIII.

The American election has in very many ways affected the political and economic position of various European countries. In the present series of notes a number of such points of contact will be found, and even in the cases where the connection is not immediately obvious, there is generally a certain relation between the two sets of facts.

The Downfall of War Administration.

It is persistently rumored in British political circles that the Prime Minister will in the near future take advantage of some convenient opportunity to place his case before the country, so that we will probably have a general election in the winter, or at the latest in the early spring. The rumor is denied, of course, with equal vehemence, but one may as well accept the fact that, owing to recent developments in Britain itself, in continental Europe and in the United States, the opposition is daily gaining in strength. So that if Lloyd George does not choose his opportunity it may be chosen for him and in that case we may see a government defeated on some entirely casual question, such as the Jutland naval fiasco.

Now, whatever one may think of Lloyd George otherwise, his worst enemy must admit that he is an exceptionally able political tactician, and therefore it will be advisable to assume that he will choose the subject on which he wishes to wage a campaign, instead of having that subject chosen for him by the opposition. I would, personally, go even farther than this in the way of prediction. For it is my personal opinion that whenever the little Welshman chooses to accept a general election, the result will be his return to power. The present coalition may be modified very seriously; some of its elements may disappear to be replaced by new powers, but the final result will in any case be a Lloyd George government.

And, in any case, we must freely admit that Lloyd George has outlasted all of his contemporary administrators. In the United States the Wilson theory has been subjected to two defeats, and the opposition has increased in intensity until it is practically unanimous. In France, Clemenceau submitted to a very sudden and still very mysterious defeat; his adversaries are more strongly entrenched today than ever. In Italy the Premier who carried on the war—Nitti—has been replaced by a pacifist and a pro-German—Giollotti—who is a syndicalist at heart and today encourages the soviet outbreaks in Northern Italy. As for Russia, we are all thankful that Czarism had passed, but is Bolshevism any improvement? And in Germany—let us be frank—almost everyone would be glad to have a Hohenzollern government again in place of the pseudo-republic of the profiteer Hugo Stinnes. All of these old administrations, all apparently firmly founded, have been outlasted by the very unstable and shifting administration of Lloyd George. So that, even if the British

Premier should lose in the coming election, he would still have outlasted all of his political contemporaries in other countries. But if a general election does come off in the next few months, take my advice and play Lloyd George to win again.

Monarchy in Germany.

From time to time we hear, in officially inspired German newspapers, that there is a great danger of renewed Socialist agitation, and that in the coming winter we must expect to hear again of Spartacist—or Bolshevist—uprisings against the new German "Republic." It will be well for Americans to bear in mind that all this sort of stuff is sent out purely for propaganda purposes, with the idea of scaring the Allies into reducing the German indemnities. Actually there is no danger of a Socialist uprising in Germany. The German workman, to use a vulgar army phrase, has not "guts enough" for that; he will remain submissive to Hugo the First, just as he was always submissive to William the Second.

Meanwhile, among all the other classes in Germany except the laborers and the profiteer, there is becoming noticeable a distinct feeling of revolt against existing conditions. The average man feels, as we all do, that a king is at his best not a particularly desirable ruler. But during the past year he has come to consider that even the worst possible king does have some personal character and pride and dignity, and that even the poorest of German pre-war rulers would not grovel, or snarl, or bluster, or cringe at the word of a coal baron. And our average German now sees that a so-called "President" of Germany is merely a tool in the hands of men who did not risk their precious lives when Germany was at war with all the world, but who pull the strings now for puppet presidents. And, this being the case, our Average German is beginning to wonder just why he should put up any longer with this very imaginary German Republic, ruled in reality by profiteers.

So, throughout all Germany, but particularly in Bavaria, we find that the more civilized classes are coming back again to the idea of a monarchy. And my own guess is that in the coming winter there is far more chance that the House of Wittelsbach will be restored to power in Bavaria than that the Bolsheviks will triumph in Berlin.

The Question of Ireland.

After my return from France in 1919 I managed to write a book, touching on practically all the questions of interest to humanity at the present day. And, until my kindly critics called attention to the fact, I had not really noticed that the "League of Nations" and "Ireland" were not even mentioned in the index. One of these defects has been repaired in a recent issue (October 28) of the MANUFACTURERS RECORD, and since that date there has been no reason to misunderstand my position regarding the League of Nations. But as regards the question of Ireland, a few words may still be in order.

During my present trip I have had the opportunity of talking over Irish problems with a considerable number of Englishmen and Irishmen, differing widely in political ideas, in rank, in profession and in social class. Out of the mass of suggestions received from these various sources there seem to be four points of outstanding interest to any impartial American. These are numbered in cold-blooded scientific fashion. For eight years we have been suffering from a vague idealism; it is time that we begin to take account of facts, however unpleasant they may be.

(1) Of all the Englishmen that I have met, I cannot recall one who was not thoroughly disgusted with the results of recent British policy regarding Ireland. Every one, I think, was ashamed of the fact that this policy had resulted in what is practically a very bitter civil war. Every one, I think, agreed that Ireland should be given its freedom. BUT—and here is the point that

Edwin C. Eckel, recently Major of Engineers, United States Army, one of the most widely-known engineers and geologists in this country, identified for many years with the United States Geological Survey and afterwards representing leading business interests in the investigation and development of iron ore and cement properties, was appointed Captain of Engineers on January 23, 1917, and detailed on the staff of the American Expeditionary Force in France. While in France Mr. Eckel was in close touch with the whole war situation. After returning to America he wrote a book entitled "Coal, Iron and War: A Study in Industrialism, Past and Future," which has attracted very wide attention in Europe and in this country.

Mr. Eckel recently returned to Europe for investigation of important matters for clients, and the MANUFACTURERS RECORD has been able to arrange with him for a series of important articles on the economic and political conditions of Europe as seen from the standpoint of a trained expert who, by reason of peculiar opportunities, is enabled to get into the closest touch with the foremost business men and Government officials in the Allied countries.

Mr. Eckel will continue from time to time, as he has the opportunity, a series of articles on European conditions. We believe that no other American who has visited Europe will be better able to size up the whole situation from the economic and political standpoint.—Editor MANUFACTURERS RECORD.

causes trouble: At least four out of five called to my attention the difficulty noted in paragraph 2 below. And at least two out of five suggested the difficulty discussed in paragraph 3 below. And to this pair of difficulties, suggested by the average Englishman, I take the liberty of adding another, which I discuss briefly in paragraph 4. It will not be popular; it is too coldly materialistic for that; but it is very real just the same, and in the long run it will be the most important question that an independent Ireland will have to face.

(2) The north of Ireland, roughly speaking, is Protestant, rich, industrious and educated. The south of Ireland is Catholic and poor. Practically every Englishman who discusses the Irish question calls your attention to the fact that it would be a moral wrong to abandon the Protestant north to the mercies of a south Catholic majority; that this would result in religious persecution and in economic inequality. And, if he is that rare being, an Englishman with a real knowledge of American conditions, he will ask if we would be willing to turn over Louisiana or Mississippi to a real majority vote, and to see our white citizens sacrificed to black rule? In making this comparison the Englishman is undoubtedly overstating his case, but the difficulty is there, nevertheless.

(3) An objection which appeals to me more forcibly, however, is the question of English defense. It is certain that a really independent Ireland, free to remain neutral or to even become an enemy during a war in which Great Britain was engaged, would mean the end of the British Empire. The geographical location of the Irish and British coasts is such as to make that result certain in these days of aeroplanes and submarines.

(4) But to my mind the greatest difficulty, rarely mentioned, is true, is the future poverty of a free Ireland. It is an unfortunate physical fact that Ireland is practically destitute of coal, of petroleum and of iron ore, and under these circumstances I cannot see the remotest chance that it can become an important industrial country under any form of government whatsoever. Except in certain very limited and specialized lines, the chief export of Ireland must continue to be men, and that is not a sound basis for material wealth and prosperity.

Apple Growers Adopt Uniform Basket.

Charleston, W. Va., November 25—[Special.]—In announcing that over 700,000 barrels of apples have been sold and stored in West Virginia east of Keyser this year, the greater part of the apple crop having been produced in Mineral, Hampshire, Morgan and Berkeley counties, James H. Stewart, Commissioner of Agriculture of West Virginia, declares it would pay apple growers to build cold-storage warehouses either as individuals or in groups, so that whenever there was a large crop which could not be marketed at favorable prices growers would be in a position to protect themselves and not be at the mercy of the buyers.

Fruit growers from West Virginia, Maryland, Pennsylvania and Virginia at a recent meeting at Martinsburg discussed the question of establishing uniform baskets, barrels and boxes. Specifications for a uniform basket were reported and adopted. The fruit growers of the States named have not been able to work out specifications and uniform standard boxes and barrels.

There is a move on foot among fruit growers of the eastern Panhandle to build a factory for the manufacture of baskets, barrels and boxes.

Houston Tire Factory Will Reopen.

Houston, Tex., November 20—[Special.]—The Port Houston Tire and Rubber Co., Inc., capitalized at \$1,000,000 has taken over the business formerly known as the Universal Tire and Rubber Association, and will resume operation of the plant early next year. It is planned to greatly increase the manufacturing facilities and new buildings will be erected.

The company will manufacture both cord and fabric tires, and maintain a tire and tube reclaiming department. It is planned to manufacture mechanical rubber goods of various kinds.

Southern Industrial Activities for November.

Throughout the South there is continued evidence of general industrial and building activity. Many new enterprises are being established, and large and important additions are under way on existing manufacturing plants and miscellaneous structures. Many thousands of buildings not directly connected with industrial pursuits are also under construction. During November the MANUFACTURERS RECORD presented 2182 industrial and building items, containing the essential details of many plants to be established or enlarged. There were 1378 industrial development items, 804 building reports, 21 items of railroad construction, 309 of financial organizations, 420 items of prices and information wanted on many different classes of products, including 16 from foreign countries.

Coal mines, oil mills, drainage systems, electric plants, flour mills, foundries, hydro-electric developments, lumber mills, railway shops, road and street construction, textile mills, water-works, etc., were among the industrial developments. Apartment-houses, bank and general office structures, churches, city and county buildings, courthouses, hotels, railway stations, schools, theaters, warehouses, etc., were among the many buildings.

The November items, not including numerous industrial enterprises of a minor character, but which in the aggregate represent a large investment, are summarized in the following table:

	Total for Nov.	Total from Jan. to Nov., inclusive.
Industrial Developments.		
Airplane Plants, Stations, etc.	4	37
Bridges, Culverts, Viaducts.	56	538
Canning and Packing Plants.	9	217
Clayworking Plants.	6	250
Coal Mines and Coke Ovens.	112	1,069
Concrete and Cement Plants.	4	75
Cotton Compresses and Gins.	41	395
Cottonseed Oil Mills.	4	65
Drainage Systems.	19	165
Electric Plants.	51	771
Fertilizer Factories.	9	174
Flour, Feed and Meal Mills.	27	359
Foundry and Machine Plants.	53	755
Gas and Oil Developments.	77	389
Hydro-Electric Plants.	3	92
Ice and Cold-Storage Plants.	37	563
Iron and Steel Plants.	1	31
Irrigation Systems.	1	18
Land Developments.	26	267
Lumber Manufacturing.	40	853
Metal-working Plants.	13	181
Mining.	22	283
Miscellaneous Construction.	29	278
Miscellaneous Enterprises.	70	1,234
Miscellaneous Factories.	143	2,282
Motor Cars, Garages, Tires, etc.	119	1,889
Railway Shops, Terminals, Roundhouses, etc.	3	85
Road and Street Construction.	213	2,848
Sewer Construction.	42	566
Shipbuilding Plants.	6	57
Telephone Systems.	15	149
Textile Mills.	19	592
Water-works.	60	740
Woodworking Plants.	38	664
	1,378	18,913
Buildings.		
Apartment-houses	29	514
Association and Fraternal.	43	610
Bank and Office.	49	965
Churches.	93	1,381
City and County.	24	323
Courthouses.	5	101
Dwellings.	224	3,382
Government and State.	11	194
Hospitals, Sanitariums, etc.	29	497
Hotels.	22	485
Miscellaneous.	23	448
Railway Stations, Sheds, etc.	11	121
Schools.	114	2,365
Stores.	59	1,435
Theaters.	24	377
Warehouses.	44	734
	804	13,777
Railroad Construction.		
Railways.	20	304
Street Railways.	1	21
	21	325
Financial.		
New Financial Corporations.	70	1,293
New Securities.	239	3,874
	309	5,167
Machinery Wanted.		
Machinery, Proposals and Supplies Wanted.	420	6,644
Fire Damage.		
Fire Damage, etc.	184	1,473
Totals.	3,116	46,299
Foreign.	16	67

Mineral Development of Spain and Its Relation to America*

By COURTENAY DE KALB.*

The port of Huelva, in the southwest part of Spain, possesses peculiar importance for the entire world. Through it passes the bulk of the raw material from which is produced that most generally useful of all chemicals, sulphuric acid. The measure of any country's industrial advancement is, by common consent, the amount of sulphuric acid per capita that it consumes.

Sulphuric acid is made from sulphur dioxide produced by burning either pyrite, which is a sulphide of iron, or by burning sulphur. Until recently pyrite was almost exclusively used. The exigencies of the late war, when shipping was not available for importing normal quantities of pyrite from Huelva, resulted in our having recourse to the sulphur of Louisiana and Texas. There are some technical advantages in using sulphur, arising from the fact that the apparatus for burning it is much less costly, and also the sulphur dioxide gas thus produced is richer, which facilitates its conversion into acid. It also makes an acid that is freer from impurities.

On the other hand, the pyrite of Huelva, considered as a sulphur ore, is essentially a by-product, and the only cost to be covered in delivering it to the acid-makers of the world is that of handling and freight. The cost of mining it is repaid with a profit by the copper it contains. Most of that metal is cheaply extracted at the mines, with no deterioration of the pyrite; in fact, the sulphur content of the ore is raised from an average of 47 to 50 per cent in the process of leaching. To a metallurgist who happens to be unfamiliar with the cementation method as practiced at the mines in the Province of Huelva this may seem paradoxical, but it is true, nevertheless.

Moreover, the cinder remaining after calcination of the pyrite in the burners at the acid factories possesses a value. It can be sintered and used as an iron ore, and it is so used in every country where Huelva pyrite is sold. Accordingly, the producers of this pyritic ore are able to meet heavy competition from the producers of elemental sulphur. The present price of Gulf brimstone at North Atlantic ports is about 17 cents per unit. The sulphur in Spanish pyrite can be sold at the same ports for very much less if need be, and still leave a margin of profit for the Huelva miner. This difference in price may suffice to offset the interest and amortization charges against the more expensive equipment needed for burning the pyrite. Therefore, it would appear that our domestic sulphur producers cannot supplant Huelva pyrite without a sharp competitive struggle.

Baltimore normally consumes about 150,000 tons of Huelva pyrite annually. In some years that amount is exceeded. In 1912, which may be taken as practically a normal year, the imports of pyrite at Baltimore were 146,053 tons, being an average of 12,171 tons per month. In the first six months of the present year there were 82,621 tons entered at the Baltimore Customhouse, being an average of 13,770 tons per month. The normal movement of Huelva pyrite to the United States is about 800,000 tons per annum, from which it is evident that Baltimore takes about 19 per cent of the total. This is the basis for Baltimore's magnificent development of the acid-phosphate industry, which makes her the greatest fertilizer center in the world.

Before drawing any lesson from this it will be well to return to the point of origin of this pyrite, and consider the significance of Huelva in international trade, past and present. It is interesting to note that it is one of the oldest ports in the world. The history of Huelva is brimming with human interest. To go no further back than 1492, we find Huelva linked to the destiny that opened the Western Hemisphere to the Christian world. Had not Columbus, discouraged after his rebuff at the court of Portugal, blundered into Huelva, you and I would not be meeting here today. At some other time and in some other way America would certainly have been discovered, but that it was discovered by Columbus in 1492 was because he came, a virtual mendicant, to the doors of the famous convent of La Rabida, which lies just

inside the harbor of Huelva. There he had the good fortune to meet a highly-educated and broad-minded man, Padre Marchena, the prior of the convent. Moreover, Padre Marchena happened to be one of Queen Isabella's confessors. Consequently, when he grasped Columbus' magnificent scheme of reaching the Indies by sailing westward, and became fascinated by it, he was in a position to lend substantial aid. He had found a great man with a great idea, who needed someone to finance him. Padre Marchena had confidential access to the one person in Spain competent to do it, for the source of power to carry important enterprises into operation in those days was the sovereign. When these fateful details had been arranged, it was to Huelva that Columbus returned to outfit his tiny fleet of caravels. Just behind the convent lay the little town of Palos, and here the ships were made ready. Huelva is part of the history of America, of the great free Republic of the United States, of the progressive city of Baltimore, and it happens that no other city in this country today is so closely bound by ties of trade to that mother of the bold adventure that added a new world of opportunity for mankind and civilization.

Going further back in the history of Huelva, we find it playing a mighty role in the commercial power and development of Rome. For more than 600 years the copper that was used in the manufactures of that world-empire came from these same mines that are still yielding the red metal from their vast leach-yards and are sending across the ocean the raw material for the acid works of Baltimore. It is estimated that the output of metallic copper from Huelva during the period of Roman occupation exceeded 3,000,000 tons, and the silver recovered as a by-product was not far from 1,000,000,000 ounces.

Long before Cato determined the political destinies of Spain, the furnaces of the Phoenicians were smoking around these mines. The piles of scoria that they left are so immense that, without making much impression upon them, the famous Rio Tinto Mining Co. has ballasted its railroad, 50 miles in length, from the mine to the port, with this Phoenician slag. In the days of King Hiram of Tyre, when he needed a business man to help him to fully reap the harvest of his maritime enterprises, he entered into an agreement with King Solomon, and together they pushed the development of these same mines that in our day are producing 3,000,000 tons of ore per annum, after 2900 years of exploitation. The story of the mines of Huelva is one of the most fascinating chapters in the history of human industry.

To appreciate the significance of Huelva, it is essential to visualize its tributary country. The port is an estuary, with several ramifications. It is a railroad terminus, from which branch six lines of railroad. The coastal plain is only about 20 miles in width, very rich, very productive in southern fruits and nuts. Back of this is a rolling country, the home of the olive. Hundreds of thousands of acres, veritable forests of olive trees, as far as the eye can reach, sweep across the valleys and climb the hills, tier after tier, to the great black bulk of the Sierra Morena in the north. Behind this olive-clad hill country, with its red-roofed villages and imposing towers, lies a rugged belt of pre-Cambrian schists densely covered by forest. On inspection this is seen to be a forest of cork oaks, seemingly wild, but actually under the careful control of a race that, through the experience of ages, has become perfected in the art of economic forestry.

Above these hills, which constitute the black front of the range of the Sierra Morena, the appearance of a mountain system is lost in wide, rolling plains that are given up to wheat growing and the raising of cattle. The broad uplift of the Sierra Morena brings to mind the familiar aspect of the elevated rolling plains of Montana. This kind of country extends nearly 200 miles toward the north and northeast from Huelva, through what is known as Estremadura, embracing the rich provinces of Badajoz and Caceres, and including an exactly similar stretch of territory across northern Sevilla, into Cordoba and Ciudad Real. This territory, constituting a natural tributary area to Huelva, comprises 28,000 square miles, and has an average density of population of

*Address given before the City Club of Baltimore.

70 persons per square mile, or approximately 2,000,000 people. As soon as one enters the Province of Badajoz, just north of Huelva, the uplift is seen to decline into a broad trough, which is the fertile but elevated valley of the Guadiana. Here, just as in northern Sevilla and Cordoba, the olive orchards are interspersed with wheat fields, while cattle, sheep and goats are herded over the higher and less cultivable areas.

On the side of agriculture it is a region of solid wealth. It is also one of the most richly-endowed mineral areas in the world. Badajoz possesses enormous deposits of high-grade iron ore. It also has 24 producing lead-silver mines, two copper mines, one tungsten mine and three lignite mines. The adjacent Province of Caceres, also in the tributary zone to Huelva, has one tin mine, one zinc mine, four iron mines, one lead mine, three tungsten mines and four phosphate mines. Cordoba is one of the most splendid mining centers of the world. In the district that logically belongs to Huelva are the big coal mines of Belmez and Valdeinfierno, which serve as the basis for the needed coke that renders possible the enormous smelter and industrial center of the Penarroya Company. This is, in its entirety, so vast and complex an industry that it would consume more than my allotted time to give you a just impression of it. Here exist lead, copper and zinc smelters, coking and by-product plants, the most advanced, most modern and scientific coal washery in the world. I am not forgetting the advances made in this country, nor am I ignorant of them. I have also seen Penarroya, and if we were using their system at Cumberland, in the Monongahela Valley, in our bituminous and anthracite fields, the oppressed consumer of coal * * * no, I was stating that wrongly * * * I should say that the struggling coal operators could make some more profit with proportionately less working capital.

At Penarroya are acid factories, two of them, a chamber plant and a contact plant; big acid-phosphate factories; complex chemical works, manufacturing dozens of standard articles of commerce; a paper-pulp mill and a paper textile mill, where thin, tough strip-paper has a web of cotton floated upon it, twisted into it and used for weaving sacks that are replacing jute sacks, at a fraction of the cost, all over Spain, for shipping such articles as acid phosphate, ammonium sulphate, neutral salts and grains of every kind. Back of these mills are tens of thousands of acres of cultivated forest for supplying the pulp. The completely nude, desolate hills of 15 years ago are today sustaining a great pulp mill under the skilful guidance of this enterprising concern and its able managers, MM. A. Malye and Joseph Tarbouriech. I have told you only a fraction, but that is enough to convince you that there is something doing in Penarroya!

This company owns mines throughout the entire northern plain country of Cordoba, others in Badajoz, and again others in Ciudad Real, where it operates a second group of coal mines, coke ovens and smelters. It owns several hundred kilometers of meter-gauge railroad, serving most of these mines, and now almost connected-across to the Puertollano group in Ciudad Real. Very curiously, however, it has no direct independent outlet to the sea. A standard-gauge line from the north passes through Penarroya and goes to the city of Cordoba and on across the lofty southern range to Malaga, on the south coast. This is a great drawback, and in time it will be remedied. The logical remedy is for an existing meter-gauge line, owned by the Cala mines in the Province of Huelva, to exercise its option and build 35 miles of road on a concession which it holds from the Government, and connect with the Penarroya meter-gauge line at Fuente del Arco. This will enable the Penarroya company to reach tidewater with its own cars, chiefly over its own tracks. Some further work would be required, some interesting financial and other negotiations, that can be carried out by captains of industry, to complete the link that would throw this large existing traffic into the city of Huelva. It is one of those things that is as inevitable as the fall of the apple in obedience to gravity. That it was not done earlier is because world commerce had not become so intense in the past, and because the significance of Huelva had not yet been fully appreciated.

I reminded you in the beginning that the consumption of sulphuric acid was the measure of industrial advancement. It is startling to realize how rapid has been the world's progress as measured by this acid test. Sulphuric acid has almost wholly been derived from the burning of Huelva pyrite, and the exports

of pyrite from that port in 1905 were 1,788,000 tons, while in 1912 they had grown to 3,025,000 tons, an increase in eight years of 63 per cent. Evidently the world was growing from 1905 to 1912! This represents a growth in the volume of industry, not in the misleading terms of money value.

The development of business at the port of Huelva is directly related to the increase in the consumption of sulphuric acid in the world. As the world's business expands, so does that of Huelva. In sensitive response and in equal degree. The average rate of increase in the total export and import movement through the port of Huelva since 1904 has been 10 per cent per annum. While it must be conceded that this lively rate of growth could not be expected to continue indefinitely, it is true, on the other hand, that the port of Huelva is only at the beginning of its development, and it is reasonably certain that if the needs of the port are adequately met through carrying out a comprehensive program of improvement, such as is now contemplated by the Huelva Harbor Commission, it will expand more rapidly in the next 12 years than it did in the first 12 years of this century.

Perhaps I have raced ahead of my story. I have wished to enable you to visualize the meaning of the industrial movement in the country tributary to Huelva, and I have shown that the farmers, the olive growers and the cattle raisers have a great deal to contribute to the prosperity of the port. You have noticed that the population is dense. Though the country looks like Montana, it is almost as thickly peopled as the State of Maryland, and these people have normal wants. They do not by any means raise as much wheat as they consume, but they have a surplus of olive oil, of dried fruits and nuts. Not being a manufacturing people, they buy all their textiles and general merchandise from abroad or from Northern Spain. Actually, England, France and Holland supply the bulk of these articles.

I have pointed out the mineral wealth of the contiguous and tributary provinces, including the marvelous development at Penarroya, but I have not yet explained how great and important are the mines of the Province of Huelva itself. They stretch across the province from east to west, that is, from the Province of Sevilla to the Republic of Portugal, a distance of slightly more than 50 miles. The producing ore zone is 25 miles wide from north to south. All the way across this area is a series of outcropping ledges which consist of volcanic rock * * * the geologist calls them igneous intrusives and classes them as basic. Accompanying these, and attracting attention to them, are elongated narrow stretches of red soil, intensely red at places.

When you plot these outcrops on a map, and then go into the field and see them, involuntarily you compare them to a herd of cattle grazing, heads all turned in the same direction, as is the habit of the bovine species. It makes one think back upon his early study of mythology and wonder a little about Geryon and his red cattle. You know that Geryon was a giant with three heads and three bodies, who possessed a herd of red cattle in what the Greeks called West Island, that is, Spain. Hercules went to Spain; fable says he set up his columns at the gates that still bear his name on the Strait of Gibraltar, those two huge rocks that guard the entrance. Killing Geryon and capturing his herd of cattle was one of Hercules' celebrated 12 labors. Incidentally Geryon's hired man, Eurytion, who seems to have been a typical fire-eating cowboy or pioneer blacksmith, hurled fire at him, and his dog Orthros also proved to be a difficult fiery beast. Somehow, in all this, one catches a hint of the early Celtiberian smelting operations that preceded the Phoenician control, and the early Greek onslaught upon the Spanish peninsula, attracted by its silver and copper, may be symbolized in this mythical adventure.

So here are Geryon's red cattle grazing across Huelva, and wherever anybody has had the courage to sink a shaft in the iron-stained soil beside one of these rusty outcrops of igneous rock he has found copper-bearing pyrite. Dozens of rich mines have been opened; one of them, La Torera, a very recent development, is only 24 miles from the harbor, and it already has over 500,000 tons of ore developed. The two most famous mines in the district, where mountains of slag grew around them from the smelting furnaces of the Phoenicians and the Romans, are the Tharsis and the Rio Tinto. The ancient name of the Rio Tinto is unidentified, but that of Tharsis, good old Biblical name of the son of Javan, who, in turn, was the grandson of Noah, still lingers. Chase that name down in the Bible if you wish a pungent story of adventure.

Tarshish was a bold pioneer who had learned copper mining and smelting from his father. That, however, is another story.

At the Tharsis mine they are now ready to produce 1,000,000 tons per annum from ore bodies that show over 100,000,000 tons proved by development. This property belongs to the progressive Scotch concern known as the Tharsis Sulphur & Copper Co., Ltd., and is administered by a highly accomplished and genial gentleman, Mr. W. P. Rutherford. The Rio Tinto is a mine with a still more universal reputation. It seems to have been the richest in silver and copper in the early days, judging from the archeological evidences. You can imagine its magnitude from the fact that, lying on the surface today around the mine, are 18,500,000 tons of ore, mined and leaching; that the company normally employs 10,000 laborers; that it paid in ore taxes in 1912, when the industry was at normal, 1,153,273 pesetas, or about \$231,000, representing 3 per cent of the value of the ore extracted; that it disburses in wages and in supplies purchased in Spain \$7,000,000 annually. It is one of the best-managed mines in existence, operated by Mr. Walter J. Browning as resident manager and controlled in policy by Sir Charles Fielding, both men of the highest talent, well and favorably known in this country also. Just now the Rio Tinto is struggling with a strike, which has been unusually persistent, but no extremely serious violations of the peace have occurred. This strike is an aftermath of the war, financed by the Germans and engineered by German Red agents in order to try to destroy the grip of the English upon these great sources of copper and sulphur ore. The strike seems now practically at an end. It began in July, and the shipments of pyrite from Huelva have been sadly reduced in consequence. It has forced many acid makers abroad to the use of sulphur, which they are burning in their pyrite burners. It is not improbable that the technical changes made in our acid factories to meet the exigencies caused by this strike may affect current practice to a considerable extent. One thing that may happen will be to use pyrite in the old burners and to boost the grade of the gas by using a small admixture of sulphur on the middle hearths. Where this has been done some beneficial results have followed.

The use of Huelva pyrite, even in America, will not cease under pressure from the sulphur producers. The sulphur producers will find that the development of acid plants in the interior of the country, following the rapidly expanding demand for acid phosphate in the Northern and Middle Western States, will give them an outlet for their product at good prices, against which imported pyrite cannot compete, while pyrite will remain a strong competitor at Baltimore, Wilmington, Philadelphia and other Atlantic ports. This will be accentuated if the market price of acid drops to anywhere near its pre-war level. Accordingly, it is fair to assume that pyrite will long continue to come to Baltimore in large quantities.

The port of Huelva possesses interest to Americans for other reasons.

1. The harbor improvements, for which engineering studies have been made by a competent commission headed by a brilliant engineer, Mr. F. Montenegro, might be undertaken by American firms on contract.

2. The improvement of the harbor, as contemplated, will facilitate the movement of pyrite and greatly stimulate the development of the mineral district of the Province of Huelva. It will also stimulate the exploitation of the iron and other mines of Badajoz and Caceres. It will encourage the consummation of plans to link the port to the railroads that extend into Cordoba and Ciudad Real, including the powerful Penarroya company. It will stimulate general trade through the port of Huelva, with all the rich districts in the tributary area.

3. The dredging of the channel, which was done by a Dutch concern under contract, has resulted in the filling of 1200 acres of tidal flats belonging to the Government, and these are now available on favorable terms of leasehold for use as factory sites for such enterprises as may be warranted at Huelva. These lands have deep-water frontage, and are served by the Harbor Commission's railway, giving switching connection with the standard-gauge Madrid, Zaragoza & Alicante and the Zafra-Huelva railways. The Harbor Commission, the Chamber of Commerce and other organizations have recently taken steps to secure a royal decree, in conformity with an existing statute, for the establishment of the benefits of a free port covering this factory area, the prospective benefits of which are obvious.

The estuary of the Odiel, which constitutes the harbor of Huelva, has been dredged so as to provide a channel across the bar 650 feet wide and $2\frac{1}{2}$ miles long, 21 feet deep, with 25 feet of water inside the bar. The maximum rise at high tide is 12 feet and the minimum $6\frac{1}{4}$ feet. There is anchorage ground inside the Odiel estuary six miles long and 1640 feet wide, while the Rio Tinto branch adds 6500x985 feet, making a total anchorage ground of 1500 acres, with a depth mainly of 25 feet.

There are two piers belonging to the State, and one each belonging to the Rio Tinto and the Tharsis companies. The north pier, Government-owned, was opened to traffic in 1908. This is 820 feet long by 69 feet wide, with 26 feet of water alongside at low tide. It is equipped with eight electric cranes having a capacity of five tons each. The pier is connected with the shore by a trestle 1066 feet long. This pier is used exclusively for the shipment of ores. The construction is of steel and concrete, and it is modern in all its appointments. The railroad track is connected with both of the standard-gauge lines reaching the port. On the shore are 37 storage yards for ores, having a total present capacity of 400,000 metric tons, and they are served by electric traveling cranes of five tons capacity each. The cost of handling ore from the stockyards to the ship is 6.718 cents per ton of 2000 pounds.

The south pier is not regarded as a permanent installation. It is well built, but is not so perfect in its construction as the other. It is 508 feet long by 80 feet wide, with 24 feet of water alongside. A curved trestle serves as an approach, and on shore is a large warehouse and open platforms.

The new project comprises an extension of the dredged area inside the estuary, especially the widening of the channel from the anchorage ground to the basin in front of the piers. The present channel is 656 feet wide, and this will be doubled.

The dredged material will be used for enlarging the terreplein between the city and the Rio Tinto, providing more room for warehouses and factory sites.

The channel across the bar is to be widened to 650 feet and deepened to admit vessels of 32-foot draft, with two feet clearance at low tide.

A second group of piers is to be constructed, the chief of which will be a commercial pier for handling general merchandise. The cost of this pier is placed at \$1,700,000. A large modern coal wharf is also part of the plan, equipped with all modern appliances. This is to be included in the free port. Another pier for large passenger ships is embraced in the estimates. This will be directly opposite the famous old Convent of La Rabida.

Many other details necessarily enter into the plans, among them being an extension of railway facilities requisite for the proper development of the port.

The total estimate, based on prices in 1918, is \$6,307,000.

The income from port dues and customs at Huelva amounts to approximately \$300,000 a year at present, which is adequate for serving as a guarantee for the contract, which would be awarded to a competent concern.

The exports from the port of Huelva from 1904 to 1912, inclusive, were:

	Metric tons.
Manganese ore.....	261,277
Copper-bearing pyrite.....	8,355,682
Iron pyrite.....	12,287,931
Iron, zinc and lead ore.....	234,336
Metallic copper.....	138,902
General merchandise.....	470,419
Total.....	22,348,547

The imports for the same period were:

	Metric tons.
Fertilizers.....	135,699
Pig-iron.....	235,865
Lumber.....	102,070
Machinery.....	24,898
General merchandise.....	661,364
Coal.....	1,333,114
Total.....	2,501,010

The inward movement of coal constitutes 6 per cent of the total outward movement in terms of weight. Of the articles exported, 5,310,851 tons were shipped to America, and only 51,705

tons, or less than 1 per cent of that tonnage, were returned to Huelva from our ports. The coal shipments came entirely from England.

Huelva seems destined to become the greatest manufacturing center of Southern Spain. It has direct rail connection with Seville and the whole rich valley of the Guadalquivir to the east; it has a large rich region directly tributary to it, and through Badajoz or Seville is the shortest route from the Atlantic, over standard-gauge track, to Madrid and the populous central plains of New Castile. It is a region in which a large profitable trade can be developed in connection with a regular steamship line if Baltimore enterprise should go after it in the same spirit and by the same methods that Robert Dollar has applied in developing the business possibilities of the Orient. There already exists a large assured tonnage from Huelva to Baltimore which would be useful in helping to promote such commerce. If Baltimoreans could obtain the contract for the harbor improvement at Huelva, and co-operate with a mercantile and steamship company organized for the purpose, commercial relations of great potentiality could be established which would add to the growing industrial progress of this favored port of Baltimore.

Abundant Crop Yields on Mexico West Coast.

Monterey, Mexico, November 19—[Special.]—Rapid rehabilitation of agricultural conditions on the west coast of Mexico has taken place during the last three months, according to information received here. It is stated that many American and other farmers who temporarily abandoned their properties have returned and already have splendid crops growing, with prospects of abundant yields. It is estimated that there will be more than 15,000 cars of winter garden truck exported from that region to the United States during the present winter. The Southern Pacific is already preparing to handle this large traffic. Most of the shipments will go to points in the western part of the United States. In addition to the large yield of vegetables upon the irrigated lands, an exceptionally big crop of sugar-cane was produced this season. More than 2000 tons of refined sugar have already been manufactured, and there are big stores of raw sugar awaiting sale and distribution.

Sugar Beets to Be Grown in Florida.

Oldsmar, Fla., November 27—[Special.]—Following plans of the United States Department of Agriculture, sugar beets will be grown here. High-grade sugar-beet seed will be planted to produce strong, healthy plants that can be shipped to other States for planting there. It is believed that the beets can be grown in Florida during the winter and then shipped north in time for setting out in the spring, giving the plants the full summer season in which to mature their seeds.

The department representatives hope that in this way seed may be produced as good or even better than that grown abroad. Heretofore seed was imported from foreign countries at considerable cost, and it is planned to place the beet-growing industry on a sounder foundation than ever before.

It is not the purpose to grow sugar beets in the South, for sugar-cane is the natural sugar-producing plant in Southern climates, while the sugar beet thrives in Northern climates.

Metal Plant to Operate on Three-Shift Basis.

Fairmont, W. Va., November 25—[Special.]—The West Virginia Metal Products Corporation, which recently began operations in this city, is preparing to operate with three eight-hour shifts, employing 2400 men, or 800 men to a shift. That plan of operation has been approved by the directors. The directors have also authorized the issuance of 40,000 \$50 non-participating stock, so as to provide about \$2,000,000 more in funds for the plant. This plan will be submitted to the stockholders of the company on December 1.

VIOLENCE IN COAL FIELD BEYOND LOCAL CONTROL.

Lawlessness in Connection With Attempts of United Mine Workers to Enforce Closed Shop in West Virginia Mines Forces Governor to Ask for Federal Aid.

Charleston, W. Va., November 28—[Special.]—Another chapter has been written in the effort of the United Mine Workers to force the "closed shop" on the mine operators of Mingo county, this campaign having become so violent in recent weeks, and especially since the withdrawal of Federal troops early in November, that it again became necessary, last week, for Governor Cornwell of West Virginia, to call upon the Federal Government for aid and to ask that Mingo county be placed under military control in order that the insurrection there might be suppressed and order restored. Violence has grown in intensity during November, a State trooper having been killed, mine plants having been burned, attacked and dynamited, and miners who have remained at work assaulted, beaten and stoned. While Judge R. D. Bailey, recently elected, has attempted to deal with the situation and to secure a force of deputy sheriffs to aid the State police in putting a stop to the numerous acts of violence, when men could not be induced to serve, he finally confessed, in a telegram to Governor Cornwell, that the county authorities were unable to control the situation and requested the return of Federal troops. It was only after it had become apparent that county authorities had lost their grip of the situation that the Governor appealed to the Federal Government for aid. Notwithstanding numerous acts of violence perpetrated on the very eve of the departure of Federal troops for Mingo county, the sheriff of that county reported everything as being quiet. Conditions in Mingo county are worst in the town in which he lives.

Not only has the campaign to force the closed shop on Mingo county mines passed beyond the control of county authorities, but is even believed to have passed beyond the control of officials of the United Mine Workers who inaugurated the campaign early in the spring, for with a development of a spirit of lawlessness there has been revived old feuds and the law has been held in utter contempt because of lax enforcement by the Sheriff of Mingo county.

Violence was resorted to in the campaign for the organization of Mingo mines when it became apparent that there were a great many miners who were opposed to striking. Had that not been the case, there would not be today at work in the mines in the zone affected more than 1600 men. They returned to work of their own volition, and despite threats and intimidation, and have remained at work at considerable risk to themselves, affording prima facie evidence of their opposition to the "closed shop." It would have been impossible to operate a single mine in the Williamson field had miners as a whole been in favor of the closed shop. That they do not favor such a principle is, of course, attested by the fact that all but 12 of the 44 mines originally closed down by the strike are in operation, and that production is about 85 per cent of normal. According to the statement of the Williamson Operators' Association, production in the strike zone amounted to 60,000 tons during the first half of November, that representing an increase over the corresponding period of October.

Higher wages, shorter hours, better living conditions, are not involved in the Mingo strike, because wages paid in the Mingo county field are on a par with wages paid in organized regions, if not in some instances higher, and there has been no complaint as to long hours.

Prosperous West Virginia Steel Company.

Weirton, W. Va., November 21—[Special.]—A stock dividend of 200 per cent has been declared by the Weirton Steel Co., operating at Weirton, W. Va. The total capitalization of the company is now \$17,521,333. Hereafter the company will pay dividends monthly. Ten million dollars is now being expended in addition of the present plants of the company.

GEORGIANS WILL PREACH INDUSTRIAL AWAKENING.

Foresee Enormous Possibilities of Development of State's Resources—Will Seek Tech. School Aid—Members of Party Returned from Inspection of North and East Industrial Centers to Tour State.

Atlanta, Ga., November 29—[Special.]—An industrial revival in Georgia, so far-reaching that it will approach the proportions of a commercial revolution, will be the probable result of the tour of the North and East taken by a party of business and professional men of the State November 17 to 25. Practically every member of this group returned fairly burning with the desire to go out into every section of the State to preach industrial awakening, and this they are going to do.

Before the special train which carried the Georgians had arrived home, Thanksgiving Day, more than 50 requests from civic and commercial bodies of the State, which were received as the tourists were leaving Boston, had been favorably passed upon and speakers assigned. Practically every one of the 127 men had pledged himself to present to the home folks the untold possibilities of Georgia's future as it had been revealed in the development of trade, commercial and industrial centers of North and East.

As Georgia is stirred by these messages, so also will the beneficial result of the development of its resources be reflected in other States of the section, it is calculated, until the entire South will be touched with an enthusiasm for diversification, which will mark the beginning of a day of new prosperity and independence.

A series of meetings throughout the State has already been arranged, and Governor Hugh M. Dorsey, one of the sponsors of the trip, which was officially known as the Greater Georgia Tech. Industrial Tour, will designate an "industrial week," during which the gospel of a greater and more closely knit industrial State will be preached. The speakers will describe their trip and tell fellow-Georgians how their Commonwealth can achieve her birthright as one of the really great and progressive business sections of the Union.

The second apparent result of the trip is the re-establishment of Georgia's position in the industrial development of the South. The zeal of the Georgians in promoting such a junket is typical of their determination to fully develop their natural resources. It is felt that the industrial advancement represented by the various big Northern concerns that were visited can also be made by Georgia and other Southern States.

This tour has served to emphasize this fact, as it could have been projected in no other way, that here are the latent resources awaiting the wizard touch of promotion to save the section uncounted millions. From the day when Mississippi passed the law prohibiting the dumping of cottonseed into the great river to the present is a long space, but there are just as important by-products awaiting development now.

For instance, Georgia has vast deposits of iron ore, and yet is needlessly paying to other States millions of dollars every year because it has no plants to convert raw material into finished product. The inspection of steel mills in Pittsburgh showed vividly what Georgia could do in this line. The visit to the plant of the Rookwood Pottery Co. brought out more clearly than ever before that this State's clay deposits offer a field capable of great development. The one thing retarding any progress along this line is the slight touch of iron in the clay which prevents the production of pure white crockery. A method for eliminating this obstacle would be the task of a research laboratory at the Georgia School of Technology, such as the one at Boston Tech.

These are only two illustrations of the powerful lessons brought home by the travelers, but they illustrate the kind of a story which is going to be told throughout the State without ceasing from now on.

With these two results—the industrial awakening and the re-establishment of Georgia to a position of leadership in industrial promotion—already apparent, the third is developing. That will be a State tour, now being arranged, which will be taken by several hundred leading citizens from every town and city, for the purpose of bringing all the people of all sections into a closer personal touch with each other, which will tend to produce a sym-
 p-

thetic co-operation in service for the development of the State. This trip, which will take place some time in January, is being planned in conference with railroad officials.

A highly valuable by-product of the trip was the advertising it gave the South. It is doubtful if any movement of recent years has brought the section into such close contact with business and educational leadership of the East. Over 3000 miles were traversed by the special train of seven cars, which was pulled by the largest locomotive of the Southern Railway. The territory touched embraced the greatest industrial and educational centers of the nation. The principal visits were made in Cincinnati, Pittsburgh, Niagara Falls, Boston, New York and Washington.

At every city the Georgians were entertained by commercial bodies, with luncheons, banquets and balls. Reception committees were invariably made up of the type of leaders particularly interested in such an undertaking as the Tech. Tour. They were composed of bankers, heads of great plants and officials of city and commercial organizations. The visitors were taken through such manufacturing plants as the Procter & Gamble soap works, the Westinghouse Electric Co., the Pierce-Arrow automobile factory, and through institutions of learning, such as the Mellon Institute and Carnegie Tech. in Pittsburgh, and the Massachusetts Institute of Technology at Boston.

In New York they were welcomed by Mayor Hylan and entertained as guests of honor at the annual banquet of the Georgia Society. The Engineers' Club of New York and representatives of all national engineering societies were prominent in receiving the Southerners. In Washington they were honored at the White House with a personal message from the President. The visit to the Bureau of Standards was one of the most profitable of the trip, and the director commended the trip and its purposes as constituting the greatest step ever attempted by any State or any section toward industrial development.

The center of the activity and progress which result from the trip will naturally be a greater School of Technology. The eyes of the party were opened to the marvelous industrial development of the Eastern cities, due directly to industrial research and experimentation. With this in mind, as they carry their impressions to the thousands who will hear them, the speakers will press, as a fundamental first step, the upbuilding of the State's institute in Atlanta. Georgia Tech.'s high rank is recognized throughout the country, and makes it the logical hub for research.

Following the January State tour, according to tentative plans, there will be made an organized effort to collect a fund of several million dollars for the purpose of establishing and maintaining here a fully equipped laboratory. Here will work the brains of technically trained men seeking information which will tell the practical men of business and industry the efficient methods of using to the utmost possibility the raw products of the State. It will be a laboratory which will engage the educated men, who in too great numbers, have been forced to give their services to other sections. The potentiality of such a step is very great.

\$1,500,000 for Masonic Orphanage in Kentucky.

Louisville, Ky., November 29—[Special.]—One of the largest building operations projected by American Free Masons during the past year, according to the Capital News Service of Washington, D. C., is the Masonic Widow and Orphans' Home projected by the Grand Lodge of Kentucky. Originally the cost of the new home was estimated at \$1,000,000, but it is said the later estimates place it at nearer \$1,500,000. The purchase of the Strand Theater, Louisville, from Kentucky Masons for approximately \$750,000 by the Shubert theatrical interests, New York, has materially aided the financing of the home, it is said.

Savannah Interests Buy Florida Shipyard.

Jacksonville, Fla., November 29—[Special.]—The South Side shipbuilding plant of the Merrill-Stevens Shipbuilding Corporation has been sold to M. A. O'Byrne and associates of Savannah, Ga. The contract between the Emergency Fleet Corporation and the purchasers has been filed in the office of the County Clerk. The consideration is said to be \$1,700,000 and includes besides the shipyard a housing project at Fletcher Park. Plans call for the operation of the plant, rather than salvaging the equipment.

United States Chamber of Commerce Opposes National Railroad Boards of Labor Adjustment.

Washington, December 2—[Special.]—The creation of National Railroad Boards of Labor Adjustment, as advocated by railroad employes, is opposed in a resolution made public today by the board of directors of the Chamber of Commerce of the United States as not in the public interest.

The Transportation Act provides that the carriers and their employes may by agreement establish local, regional or national boards for settlement of all controversies not directly involving wage disputes. Failure of the roads and their men to agree as to which of the three types should be set up has resulted in disputes remaining unsettled. The employes are united in advocacy of the creation of national boards. A majority of the carriers are for local boards.

"In the opinion of the board," says the resolution adopted, "the establishment of national adjustment boards as desired by representatives of the several organizations of the employes would tend to bring about a state of nationalization of the railroads of the United States, and eventually to produce the same result in all industries, producing a constantly increasing cost of transportation and production, to the incalculable injury of the public at large and injuriously affecting both the employers and the employes in the ultimate result.

"The functioning of such National Boards of Labor Adjustment will inevitably lessen efficiency and impair the discipline necessary to the successful operation of the railway systems of the United States under private control, subject to Government regulation.

"Such National Boards of Adjustment will effectually prevent open-shop operation, under which the employer and the employe may enter into and determine the conditions of employment relations with each other, and thereby impair the successful conduct and full development of the transportation systems in the first instance, and of all industrial establishments when this form of nationalization is extended to them, as will inevitably be extended in case it is established in connection with the railroad systems of the United States.

"The result of the operation of such National Railroad Boards of Labor Adjustment will make impossible intelligent and practical co-operation directly between employers and employes, based upon mutual recognition of their community of interest involved in the success of the particular railway or industrial establishment in which they are associated.

"This board is opposed to any procedure which now or hereafter will result in the establishment of National Labor Adjustment Boards as advocated by the representatives of the several organizations of railroad employes."

A report of the Chamber's Railroad Committee which accompanies the resolution of the board points out that representatives of organized railroad employes are urging that there is power inherent in the Railroad Labor Board to create national adjustment boards and to endow them with powers national in scope. This position is attacked by the Railroad Committee, which argues that failure to establish such boards by agreement renders nugatory provisions of the Transportation Act making possible their creation. So decidedly are the views of railroad officials and the representatives of organized railroad employes at variance as to the nature of the boards, there is small prospect, says the committee, of their being established by agreement.

A preamble to the resolution adopted by the board of directors declares the public interest is involved in that no provision is made for public representation on the proposed adjustment boards. It points out that failure of the carriers and their employes to come to an agreement indicates that the two parties are not making every reasonable effort and are not adopting every available means to avoid interruption of the operation of the roads, as was made clearly their duty under the Transportation Act.

Peanut Growers and Dealers of Virginia and North Carolina Organize.

Norfolk, Va., November 29—[Special.]—An organization to be known as the Virginia-Carolina Co-operative Peanut Exchange is being formed by growers and dealers in North Carolina and Virginia to facilitate the handling of the raw product and also to

inaugurate a widespread campaign to increase the sale of peanut products.

Thirty-five hundred farmers and many dealers in peanuts have already joined in the movement. If an additional membership of 1500 is obtained, which the organizers feel sure will be accomplished, the proposed Virginia-Carolina Co-operative Peanut Exchange will embrace within its membership 62 per cent of the growers and dealers in Virginia and North Carolina.

Modeling its constitution along the lines adopted by California and Florida fruit growers during the past 10 years, the peanut planters are anticipating success with the proposed exchange.

J. F. Fooshe has been made general manager of the organization, with headquarters in Suffolk, and is personally conducting the campaign for membership.

The members of the exchange will begin to operate under its constitution and rules with the crop of 1921, the digging and marketing of this year's crop being practically finished.

It is confidently expected that between 7000 and 8000 members will have joined the Virginia-Carolina Co-operative Peanut Exchange by next spring.

Will Immediately Rebuild New Orleans Wharves Destroyed by Fire.

New Orleans, La., November 23—[Special.]—Fire, the estimated damage of which is \$1,000,000, destroyed 1500 feet of New Orleans' wharf system in the early hours of November 18. Three ships anchored alongside were damaged before they could be dragged into mid-river. Eight box cars, loaded with material consigned to the United States Government, were destroyed. The fire raged several hours.

It is believed that sparks from a switch engine engaged in transferring cars to and from the wharf caused the fire. The blaze was discovered by watchmen, who gave the alarm, but it was hours before the fire could be brought under control.

The wharf destroyed was being completed for the Cuyamei Fruit Co. It was the last word in banana-wharf construction. The wharves of New Orleans are owned by the State Dock Board. The State's loss is estimated at \$600,000 alone. A special sinking fund provides for such emergencies. Work of rebuilding the wharf is to begin as soon as possible. It is stated that the recent allotment of 2100 feet of wharf space at the army base will enable the port to handle its business.

Operations of a Unique Receivership.

Burkburnett, Tex., November 18—[Special.]—It is shown by the report just made by Frederick A. Delano, Federal receiver for the oil wells that are situated in the disputed territory bordering the Red River near here, that during the six months ending September 30 these properties produced more than 1,000,000 barrels of oil, which sold for a total of \$3,069,212. This big production came from 40 wells, belonging to 33 operators, which remained in charge of the receiver after he had returned, upon the court's orders, 115 wells to thrifty operators. This order was issued June 7, 1920.

The receivership came as the result of a dispute between Texas and Oklahoma as to the true boundary line between the two States. Both Texas and Oklahoma issued oil permits on land in the Red River bottoms, where the producing wells are situated. The Federal Government took hold of the situation pending final decision by the courts as to the rightful boundary.

Jefferson Hotel Sold to Colonel Consolvo.

Norfolk, Va., November 29—[Special.]—The purchase of the Jefferson Hotel in Richmond by Col. Charles H. Consolvo, owner and proprietor of the Belvedere in Baltimore and the Monticello in Norfolk, has been announced by Jonathan Bryan, president of the Jefferson Realty Corporation of Richmond.

The purchase price has not been given out officially, but sale prices of the stock indicate that the Jefferson has a valuation of something between \$1,000,000 and \$1,200,000, and it is the belief that Colonel Consolvo and his associates paid not less than \$1,000,000 for the Jefferson.

As the owner and proprietor now of the triple chain of hotels—the Belvedere in Baltimore, the Monticello in Norfolk and the Jefferson in Richmond, all high-class, modern hostleries—Colonel Consolvo becomes one of the prominent hotel men of the East.

LARGE WINDOW GLASS MERGER.

Twelve to Fifteen Companies in West Virginia, Oklahoma, Pennsylvania and Ohio Organize New Corporation—Production to Be Increased.

Clarksburg, W. Va., November 29—[Special.]—The Interstate Window Glass Co., incorporated under the laws of West Virginia, has been organized, representing a merger of from 12 to 15 glass plants in Pennsylvania, West Virginia, Ohio and Oklahoma. The merger will become effective soon after January 1. This merger is said to be the outcome of litigation covering the use of patents against several independent concerns won by the American Window Glass Co. American Window Glass Co. machines are to be used on a royalty basis by the new company, and production will be largely increased.

In the list of companies merged are the Pennsylvania Window Glass Co. and the Kane Glass Co. of Kane, Pa.; the plants of the Consolidated Window Glass Co. at Hazelhurst and Mt. Jewett, Pa.; Empire Glass Co. Shinglehouse, Pa.; Smethport Glass Co., Smethport, Pa.; Camp Glass Co., Huntington, W. Va.; Crescent Glass Co., Weston, W. Va.; Tuna Glass Co. and West Fork Glass Co., Clarksburg, W. Va.; Columbus Glass Co., Lancaster, O.; Okmulgee Window Glass Co., Okmulgee, Okla.

On the roster of newly elected officers are: H. J. Walter of Bradford, Pa., president; T. W. Camp, Smethport, Pa., vice-president; W. S. Calderwood, Kane, Pa., vice-president; F. D. Gallup, Smethport, Pa., secretary and treasurer. On the board of directors are the following: H. J. Walter, Bradford, Pa.; T. W. Camp, George W. Mitchell, Smethport, Pa.; T. F. Koblegard, Weston, W. Va.; Henry McSweeney, Atlantic City, N. J.; Charles Wandless, Lancaster, O.; Charles L. Surh, Oil City, Pa.; A. H. Gacney, R. A. Hill and W. S. Calderwood, Kane, Pa.

Weekly Coal Report.

Production of soft coal fell below the 12,000,000-ton mark during the week ended November 20, according to the United States Geological Survey's weekly report, the total output for the period, including lignite and coal coked at the mines, being estimated at 11,770,000 net tons, the lowest in any full-time week since October 2, when there was a strike in Northern Ohio. The decline centered in the northern and middle Appalachian regions, especially in the Pocahontas railroad region. Production was heavy in the West. With an estimated production of 1,975,000 tons for the same week, the output of anthracite coal is again back at normal. Beehive oven coke produced during the week totaled 365,000 net tons, a decrease of 15,000 net tons. Recovering from a temporary depression, the Lake movement of coal rose to 711,844 tons during the week. Some decreases marked the shipments to tide-water and also of rail shipments to New England.

Readjustment of Mineral Industries Affected by the War.

The United States Tariff Commission has issued a report dealing with certain minerals and metals especially affected by conditions arising from the war. The minerals covered are manganese, tungsten, magnesite, graphite, quicksilver, chromite, antimony, potash, pyrites and sulphur. Most of these were used during the war, either directly or indirectly, for military purposes, and readjustment to peace conditions has been slow and difficult.

Rushing Work on New Paper Mill.

Canton, N. C., November 29—[Special.]—The Champion Fiber Co. is rushing work on its new mill near here. Work is proceeding as fast as materials and men can be procured, and fully 500 persons will be given employment in construction work. Foundations have been started and concrete forms are being placed. Several new houses have been erected to care for new workers, and a boarding-house has been taken over for use of the men engaged on the new project.

Program for Convention of National Rivers and Harbors Congress.

Washington, D. C., November 29—[Special.]—At the sixteenth convention of the National Rivers and Harbors Congress, to be held here December 8, 9 and 10, the program as at present arranged is as follows:

First session, Wednesday morning, December 8, 10 o'clock—Invocation; address of welcome, Miss Mabel Boardman, commissioner, District of Columbia; address, "Waterways from the War Department Standpoint," Secretary Baker; "Inland Waterways and the Merchant Marine," Secretary of Commerce Alexander; "A Word of Greeting," Mrs. Sarah Willard Strout, Portland, Me., president Women's National Rivers and Harbors Congress; "United We Stand, Divided We Fall," Senator Jos. E. Ransdell; annual report, S. A. Thompson, secretary-treasurer; annual address and report, Hon. John H. Small, M. C., president.

Wednesday afternoon, 2 o'clock—"A Nation Plan—Co-ordination of Transportation Facilities," Cyrus W. Kehr, Knoxville, Tenn.; "Future River and Harbor Bills," Hon. S. Wallace Dempsey, M. C., Lockport, N. Y.; "Do We Need More Water Transportation? If So, How Is It to Be Measured?" Brig.-Gen. Charles Keller, resident member Board of Engineers for Rivers and Harbors; "Texas' Interest in Waterways," Roy Miller, Corpus Christi, Tex.; "The Waterways and the Railways," C. H. Markham, Chicago, Ill., president Illinois-Central Railroad; "The Trouble with the Waterways and the Remedy," Maj.-Gen. Lansing H. Beach, Chief of Engineers United States Army; "Bulk Cargo Handling on the Great Lakes," E. R. Kenner, Cleveland, O., illustrated with moving pictures.

Thursday morning session—"The Waterway Program Facilitated by Federal Reorganization," M. O. Leighton, chairman National Public Works Department Association; "Gray's Harbor," W. L. Morris, Aberdeen, Wash., secretary Chamber of Commerce; "The Vital Importance of Terminals," John Meigs, Philadelphia, Pa., president American Society of Terminal Engineers; "Terminal Developments at the Port of New York," Murray Hulbert, Commissioner of Docks, New York city; "The Port of Seattle," Hon. John F. Miller, M. C., Seattle, Wash.

Thursday afternoon session—"Transportation—the Nation's Greatest Problem," James E. Smith, St. Louis, Mo., vice-president-at-large Mississippi Valley Association; address by Hon. Pat. Harrison, United States Senator, Gulfport, Miss.; "The Port of New Orleans," Walter Parker, New Orleans, La., general manager Association of Commerce; "Present Activities and Future Plans," Brig.-Gen. W. D. Connor, chief Inland and Coastwise Waterways Service; "Activities on the New York State Barge Canal in 1920 and Results of Government Operation," Edward S. Walsh, Albany, N. Y., State Superintendent of Public Works. General discussion.

Friday morning session—Address, "Reorganization of Terminals," Hon. John N. Cole, Boston, Mass., commissioner State Department of Public Works; "The Call of States," brief addresses by representatives chosen by State delegations. Adoption of resolutions. Election of officers. Adjournment.

Banquet, Thursday evening—Toastmaster, Hon. J. Hampton Moore, mayor of Philadelphia; speakers: The Ambassador of Argentina; the Ambassador of Brazil; the Charge d'Affaires of the Netherlands; the Commercial Attache of the Swedish Legation; Hon. Thomas J. Hefling, United States Senator from Alabama; Mrs. Richard Edwards, Peru, Ind., treasurer National League of Women Voters.

Some last-minute changes are possible, Senator Borah has been invited to speak on "Panama Canal Tolls," and "Uncle Joe" Cannon may be at the banquet, but their acceptances have not been received.

The Cotton Movement.

In his report of November 26, 1920, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 118 days of the season was 4,065,629 bales, a decrease from the same period last year of 919,125 bales. The exports were 1,610,365 bales, a decrease of 226,116 bales. The takings by Northern spinners were 392,939 bales, a decrease of 545,020 bales; by Southern spinners, 988,911 bales, a decrease of 486,338 bales.

THE IRON AND STEEL SITUATION

Uniform Market, Just Established, May Be Shortlived.

Pittsburgh, Pa., November 29—[Special.]—The remaining independent steel producers have now come down to the Steel Corporation or Industrial Board prices on bars, shapes and plates, these prices being 2.35 cents, 2.45 cents and 2.65 cents, respectively. The final break occurred last Friday. In the morning the largest independent maker of bars, located in Youngstown, together with an independent in Pittsburgh, began formally quoting the reduced prices, and the remaining mills promptly followed. For more than a month there had been occasional cases of a mill selling one or other of these products at the Steel Corporation price, but the cases were considered exceptional. As long as the independents had company, one with another, in quoting prices above the Corporation level they were content, but when the danger arose of somebody being the last to reduce the remaining mills promptly announced the lower prices.

The situation now is that the independent market is at the Steel Corporation level in tinplate, bars, shapes and plates, and above that level on sheets, pipe and wire products. Technically rails are in doubt, but practically there is no question that the independents will have to sell rails at the Steel Corporation prices of \$45 for Bessemer and \$47 for open-hearth. Counting in rails, more than two-thirds of the finished steel market is now at a uniform price as between the Corporation and independents, while the rest of the market will soon be in that condition.

This condition of a uniform market, however, may be only temporary. The Steel Corporation is still well supplied with orders, while the independents have very little tonnage on books. They had quite an accumulation a couple of months ago, but nearly all has been either shipped or cancelled. In the circumstances, it is probable rather than otherwise that some of the independents will now shade the Steel Corporation prices. If they could come down many dollars a ton, as they have had to do, they can presumably come down \$1, \$2 or \$3 additionally. With the record the independents have made, as compared with the Steel Corporation's conservative action, it will naturally be difficult for the independents to get trade on even terms. Any customer of the Steel Corporation knows that if he leaves the fold now for a few dollars a ton the door will not be open for him to return when steel becomes scarce, for the Corporation then would naturally prefer to distribute its product, as far as it goes, among "regular" customers.

Buying Very Light.

Even the sharp reductions made by certain independents in bars, shapes and plates last Friday has not brought them any additional business to speak of. There was really no price issue or deadlock, the quietness of the market being due to buyers having nothing on which they needed to cover, particularly as they wished to reach January 1 with the lightest possible inventories and commitments.

While buyers did not take advantage of the reductions by placing orders, they were very glad that the reductions occurred, because that gives them an opportunity to mark down their inventories and count the losses in this year's business when making tax returns. The buyers knew the losses existed and were resigned to that, while with the evidence afforded they can save a little of the loss by marking down their year's profits.

After the turn of the year buying in steel products is likely to increase somewhat, as buyers cannot get along indefinitely without buying something. After a period of great activity there is always a particularly dull period, while stocks are reduced and consumers and jobbers get down to buying on a hand-to-mouth business, while afterwards, even if consumption is light, there is some buying from day to day.

The steel market, however, is not as dead as it looks, since the open market is reportable only from the standpoint of the independents. The Steel Corporation has not been able to offer its products in the general market because it had to allot its output to regular customers, and the Corporation continues to book business from day to day in most of its products with regular customers. In two lines at least, sheets and tinplate, the Corporation is now a seller, since it is oversold for the remainder of this

year, and for two or three months into the new year, while it has not yet opened order-books for the first half of next year. This will probably be done about the middle of December.

Sheets Decline Sharply.

As sheets had advanced by far the most of the common steel products, they have had the greatest decline without being yet down to the Steel Corporation level. For about two months black sheets declined at the rate of about a quarter cent a pound, or \$5 a net ton, per week, but in the past fortnight there has been a decline of about a cent a pound, to 5 cents for black sheets, 28 gauge, the Steel Corporation price being 4.35 cents. There are several sellers at 5 cents, and on a desirable order this price would probably be shaded \$2 or \$3 a ton. Galvanized sheets were quoted at 6.70 cents by one mill at the beginning of last week, this being considered an exceptionally low price, as other mills were asking 7 cents or more, but at the close of last week there were several sellers at 6.50 cents. Blue annealed is not over 4.50 cents, and this price could probably be shaded somewhat. Steel Corporation prices are 5.70 cents on galvanized and 3.55 cents on blue annealed. A couple months ago it was estimated that practically all the independent sheet mills were sold not only through this year, but into next year. If that was the case, a very large amount of business has since been cancelled.

Mill Operations.

The Steel Corporation continues to operate at about the same rate as for several months past, and is well supplied with orders. Some independents are closed entirely, others operating at 60 to 80 per cent, and the general average among the independents is probably under 50 per cent. The mills closed are not closed indefinitely, in most cases, but are simply waiting for specifications to accumulate for a moderately full run of a week or two. It does not pay to operate a mill continuously week after week at a low rate, it being better to alternate between idleness and moderately full operation. The vast difference between the Steel Corporation and independent position as to orders on books is, of course, due to the great difference in prices.

Wages and Costs.

Computed by a weighted average, the Steel Corporation's prices on finished steel products are about 80 per cent above the 10-year pre-war average. Widely divergent statements are made as to the increase in costs. Wage rates are up over 100 per cent, while freight rates are up about 70 per cent. Some minor items of cost are up much more, but they are not regarded seriously, as they will simply have to come down. The freight rates, of course, will not come down. As to wages, there is a divergence of opinion. A large independent mill in Youngstown recently notified its employees in a plain and frank statement that wages would have to come down, but that no effort to reduce wages would be made until the cost of living had materially declined. Manufacturers uniformly state that the most recalcitrant line of business, in the matter of readjustment, is the retail store trade; that the retailers did not hesitate to mark up their prices extravagantly on goods already bought, but are unwilling to pocket losses on stocks when the movement is the other way. There is no intimation as to what the Steel Corporation will do in the matter of wages. For more than a month there have been reports that it contemplated a reduction in wages in the Connellsville coke region, but the report has been vigorously denied, and it is possible it has been kept in circulation by independent coke producers who themselves contemplated making reductions.

Pig-iron and Coke.

Bessemer and basic pig-iron are each down \$2.50 in the week, to \$37.50 and \$35, respectively, f. o. b. valley furnaces, the decline occurring by way of producers offering the iron at lower figures rather than by there being any inquiry to bring out competitive quotations. Foundry iron is down \$2, to \$37, valley, on some very small transactions. The market is down from the top prices attained last August by \$13 in foundry, \$11 in Bessemer and \$13.50 in basic. The decline is easily the sharpest on record, and that

is natural in the circumstances, for in the past when the market softened the furnaces still had much business on books. This time they had very little, since for many months buyers had recognized that prices were extremely high, and hence they bought very sparingly. If the rate of decline should keep up, pig-iron would be under \$30 by the end of the year, but it is likely the pace of decline will slow down as the cost line is approached. Just where the cost line lies cannot be determined until coke finds something like a reasonable level. Thus far the Connellsville coke operators have been disposed to try to retain a considerable part of the large profits they have been having. The furnaces, having resigned themselves to the idea of moderate profits in future, will not contract for coke for the first half of the new year until they observe the coke operators in the same mood.

Market at Birmingham Dull and Quiet.

Birmingham, Ala., November 29—[Special.]—Some little pig-iron business followed the announcement that \$38 per ton, No. 2 foundry, 1.75 to 2.25 per cent silicon, was acceptable. The amount of business taken, however, was not very great. Some producers are still maintaining the \$42 schedule. Very few inquiries are coming in, but there is a better feeling as to the future conditions. Further curtailment of the make in this district is not improbable, as it is not desired to pile up iron at present costs. Not more than half a month's make will be found on the furnace yards at present. Local consumption is also slackening off, although the cast-iron pipe plants are still melting considerable iron, but intimate that the time is near when old contracts will have been worked off, and new specifications are far from being sufficient to warrant full operation. Soil-pipe plants and foundries and machine shops are in need of contracts. There have been no cancellations of pig-iron contracts recently, though there has been some additional correspondence on the subject. Smaller companies which announced concessions on the pig-iron prices recently intimate that they will be able to handle more business after the first of the year. The Steel Corporation subsidiary in this district has maintained the \$38 price for some time, though not able to offer any great tonnage. Nothing is said as to the pig-iron market possibilities of the coming year beyond a belief that it will be better than it is now or has been recently. Industrial leaders in the Birmingham district are manifesting less pessimism than in other sections, according to reports coming here. There is none, however, who does not believe that there is likelihood of some depression and that necessity will bring about readjustments, labor costs included.

The deliveries of pig-iron in the Birmingham district at present, together with the melt, is a little under the make, and there are less furnaces in operation now than a month ago. Estimates as to the month's pig-iron production in Alabama indicate that a falling off will be shown in comparison with the figures of October, when 196,669 tons were credited to this State. The prediction is made that the year's output of blast furnaces in Alabama will show an appreciable increase over the amount produced in 1919. There is no doubt but that the November production will touch the low mark for the year, but will be greater than eight months of last year.

The Alabama Company began this week using the casting machine recently installed at the Gadsden furnace. This machine turns out iron in uniform size and provides for grading of the product so that the consumer will have a decidedly less difficult time in making analysis. The pigs will be lettered, so that the consumers will know the iron also.

Steel mills of the Corporation are doing better in this district than the independents. Gulf States Steel Corporation will put in readjustment plans from now on, including reduction of bonuses for the men, equivalent to reduction in salaries, as well as curtailment of production by shutting down departments in the mills from time to time. Steel fabricating plants are also participating in the readjustments. At the plants of the Tennessee Coal, Iron & Railroad Co. and the American Steel & Wire Co., subsidiary organizations of the Steel Corporation, there is steady operations.

Coal production in Alabama, despite the miners' strike, has improved greatly of late, and on a declining market there is too much steam coal noted from time to time. Domestic coal is still short.

The coke market in Alabama has softened much during the past two weeks, though production has not been affected materially. The by-product coke ovens are producing steadily. Quotations, \$10 on furnace coke and \$12.50 for foundry. Local demands have recently abated to a considerable extent.

Birmingham coal operators and other citizens have contributed liberally toward the fund raised in Mobile for the purchase of the site on which the Government is to build a coal-storage plant to cost \$400,000. The storage plant will be used for handling of imported manganese ore being brought to this district from Brazil and elsewhere. Sixty-two hundred tons of manganese ore from Brazil will arrive this week at Mobile and will be transferred to barges on the Warrior River and brought to this district. The Tennessee Coal, Iron & Railroad Co. is using considerable manganese ore, and regular shipments of the product are looked for.

The scrap iron and steel market continues very quiet, quotations nominal, and little or no trading.

Pig-iron and iron and steel quotations in the Birmingham district are as follows:

PIG-IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$38.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$39.25; iron of 2.75 to 3.25 per cent silicon, \$40.25; iron of 3.25 to 3.75 per cent silicon, \$41.25; iron of 3.75 to 4.25 per cent silicon, \$42.25; charcoal iron, f. o. b. furnaces, \$55.00.

OLD MATERIAL.

Old steel axles.....	\$26.00 to \$28.00
Old iron axles.....	25.00 to 26.00
Old steel rails.....	18.00 to 20.00
Heavy melting steel.....	18.00 to 20.00
No. 1 railroad wrought.....	18.00 to 20.00
No. 1 cast.....	30.00 to 31.00
Stove plate.....	23.00 to 25.00
Old car wheels.....	28.00 to 30.00
Old tramcar wheels.....	27.00 to 29.00
Machine shop turnings.....	10.00 to 11.00
Cast-iron borings.....	10.00 to 11.00

Textile Company Establishes Wireless Stations.

Charlotte, N. C., November 27—[Special.]—The Consolidated Textile Corporation, with home office in Greensboro, has installed a receiving and sending wireless station there and has set up receiving wireless stations in Burlington, Raleigh and Lynchburg. The company has six mills in this territory, besides those at Greensboro, and it is the expectation that wireless receiving stations will be set up at the other mills also. In this way the company plans to keep in constant touch with all its interests in this section. The apparatus was set up by an employee of the company who served in France and learned wireless telegraphy while in the army.

North Georgia Cotton Company Organized.

The North Georgia Cotton Co. of Athens, Ga., has been organized with \$100,000 capital. The company has a complete building for manufacture and all machinery has been purchased and installed. Electric power will be utilized. The daily capacity of the mill is 5000 pounds. Officers of the new company are W. T. Bryan, president; John Hill, vice-president; M. M. Bryan, secretary; C. D. Cox, treasurer. The engineer and architect is John Hill, Atlanta, Ga.

Textile Mill Notes.

Waxahachie Cotton Mills, Waxahachie, Tex., has increased its capital from \$200,000 to \$300,000.

The Watts Spinning Co., Greensboro, N. C., will increase its capital from \$250,000 to \$800,000.

The P. H. Hanes Knitting Co., Winston-Salem, N. C., has added to its lines the production of nainsook athletic union suits for men and boys.

The recently voted increase in capital of the Hillsboro Cotton Mills, Hillsboro, Texas, from \$90,000 to \$300,000, will be utilized in making additions and improvements to the mill.

Agricultural Implements.

KARAM SHER & Co., Patarsi, Patiala State, India.—We are especially interested in agricultural implements and other items required by farmers.

RAILROADS

Capitalists Inspecting New Route to Mexico and the Pacific.

Dallas, Tex., November 27—[Special.]—Construction of about 350 miles of railroad in Mexico and 150 miles in Texas at a cost of approximately \$20,000,000 is expected to follow the inspection trip of officials of the Kansas City, Mexico & Orient railroad companies of Kansas, Texas and Mexico, and parties interested financially in the line. Headed by W. T. Kemper, president and receiver of the Orient lines, and chairman of the board of directors of the National Bank of Commerce and of the Commerce Trust Company of Kansas City, Mo., a party of officers and capitalists have gone to Mexico City to attend the Presidential inauguration of General Alvaro Obregon on December 1, and also to inspect the companies' properties.

While in Dallas, Mr. Kemper said that assurances have been received from the Mexican Government that it will aid the company in connecting up its line so as to give a new transcontinental railroad ending on the west coast of Mexico. He also expressed confidence that after members of the party had inspected the properties and have seen conditions in Mexico and the resources and possibilities of the territory traversed by the line, the financing of the plan would be an easy matter. He placed the cost of completing the road as originally planned at \$20,000,000.

The "Orient" now runs from Wichita, Kan., to Alpine, Tex., 735 miles. It is 83 miles from Alpine to the Mexican border. In Mexico the road operated from Topolobampo, on the west coast, to Fuerte, 62 miles inland. There is another line passing through Chihuahua, 187 miles in length. It will be necessary to build from the eastern terminus of the Topolobampo line to the western terminus of the Chihuahua line, and from the eastern terminus of the Chihuahua line to Alpine, Tex.

A line from San Angelo to Del Rio, Tex., is also planned by the "Orient." San Angelo is headquarters of the Texas division. The dump has been partly built for the line from San Angelo to Del Rio, 150 miles. By connecting up this line with the Mexican Railways of Mexico, at Allende, a new short line from Kansas City to Mexico City would be made. The contract has been let for the construction of the connection from Allende to Del Rio, 35 miles.

Sir Joseph Brainwaith of London, England, the largest individual stockholder and representative of English and Holland interests in the Orient companies, is with the party.

September Record of the Railroads.

For the third successive month, Class 1 railroads of the United States moved more freight during September than they ever transported in a single month, either during government control or the pre-war period, according to data just compiled by the Bureau of Railway Economics. The net ton miles (the number of tons of freight multiplied by the number of miles they were carried) totaled for September 40,999,843,000. This was 1,706,992,000 net ton miles less than the total for August, but was 564,335,000 greater than the net ton miles for July. The total for September also exceeded that for the same month last year by 2,139,532,000. Part of the difference between the net ton miles for September and August resulted from a temporary lull due to Labor Day, and also the fact that there is one less day in September than in August. The desired average loading of 30 tons for each loaded freight car was also realized during September, and the average daily movement of freight cars was increased to 28.1 miles as compared with 27.4 miles in August.

Houston to Texas City.

A report from Houston, Texas, says that the Houston, Bay Shore & Texas City Traction Co. proposes to increase its capital stock from \$300,000 to \$1,000,000 for the construction of its contemplated interurban electric railway from Houston to Texas City, Texas, about 45 miles. Ed. Kennedy, 621 Binz Building, Houston, is president.

Intrastate Rates Must Meet Interstate Rates.

The Interstate Commerce Commission, in its decision in the Illinois intrastate rates case, holds that lower passenger fares for intrastate travel in Illinois than charged for interstate travel, subject interstate travelers and points outside of the State of Illinois to undue prejudice and disadvantage, and constitute an unjust discrimination against interstate commerce. The carriers are ordered to increase the passenger fares within the State of Illinois 20 per cent to bring them up to the level of interstate fares, and to establish the surcharge of 50 per cent on Pullman traffic prescribed by the Commission last August in the general rate case. Questions relating to freight rates, commutation and excursion fares are reserved for later determination.

Why the South Should Raise More Livestock.

Roland, Turner, general agricultural agent of the Southern Railway System, Atlanta, Ga., says:

"Labor conditions make it necessary to change our farming system so as to increase the ratio of horse or tractive power to man power if the value of our farm production is to be maintained. Southern farming has employed too great a proportion of man or hand labor. A greater proportion of our lands should be given over to the production of forage and feed which can be utilized or marketed to best advantage as livestock.

"Through diversified farming we must correct the economic error of buying food and feed from other sections. The system of farming followed in the South has caused a constant deterioration of our soils. Farms on which livestock are kept increase in fertility and produce more profitable crops. Livestock raising in connection with Southern agriculture will build up and maintain soil fertility. Higher producing capacity and greater prosperity will result.

"An acre in the South will produce a greater volume of highly nutritious grazing over a longer period than in any other part of the country. We can produce grain feeds and we have a wide range of leguminous crops with large yields, ideal for forage. We also have cottonseed and peanut meal and cake at our doors.

"Livestock markets have been developed, and packing-houses in the South have capacity for 70 per cent more meat animals than are being produced. Southern farmers should take full advantage of their opportunities for profitable livestock production."

Railroad Construction in Oklahoma.

Oklahoma City, Okla., November 26—[Special.]—Further construction of short oil field lines in the eastern central part of the State are contemplated by the Oklahoma Southwestern Railway Co., according to news from Okmulgee. The report is that the road now being built from Bristow to Okmulgee will be extended to the Henryetta coal district and thence through Okemah to Shawnee. The Oklahoma Southwestern has completed nearly twenty miles of its line, but when the project was started officials announced their intention of constructing a line of road southwest from Oklahoma City, and there was a report that the company was negotiating with the Oklahoma Railway Co. to use that company's interurban track between Shawnee and Oklahoma City in case this line was built.

Further railroad work in the southern and southwestern parts of Oklahoma is predicted for 1921. It appears probable that the Rock Island will carry out a project to build a line from Waurika, Okla., to Wichita Falls, Tex. Waurika, near the Red River, is the junction of the Rock Island main line and the Enid and Anadarko branch. There are also reports that the Rock Island will build east from Waurika to Ringling, to connect with John Ringling's road from Ardmore.

Oil development forecasts a railroad across McClain, Garvin, Stephens and Cotton counties, probably touching the towns of Lindsay, Duncan and Walters, with Wichita Falls as the ultimate terminus. This route was favored by Jake Hamon. In part, it was considered by the Santa Fe System, and in a measure it conforms to the plans of the Oklahoma Southwestern.

New Interurban Plan.

Plans to construct a railroad to be operated by electricity are being promoted by R. D. Long, according to a report from Muskogee, Okla., the object being to connect Oklahoma City with Henryetta, Okmulgee, Muskogee and Tulsa by a fast interurban route. A survey has been made. The power plant site is to be in the midst of the Henryetta coal mining district. Eastern capitalists have been interested and will immediately investigate the territory to be served. It is said that it would cost \$24,000,000 to complete the road.

The idea for building such a line was first developed in 1917, but the war caused it to be laid aside until now. Mr. Long has been interested in electric railway plans for some time and was formerly manager of the Muskogee Electric Traction Co.

Will Build Long Siding for Coal Traffic.

Morgantown, W. Va., November 27—[Special.]—A \$30,000 siding will be constructed by the Morgantown & Wheeling Railroad from Randal to Osage, for the purpose of accommodating about 110 cars. As this line is in the hands of a receiver, the funds necessary for the work will be furnished by coal operators having mines on the route, with the understanding that they will be reimbursed. Coal traffic originating on this road, which connects with the Monongahela Railway at Maidsville, has grown so rapidly that the cars, both loaded and empty, cannot be handled satisfactorily under single-track conditions. The Circuit Court has sanctioned the contract between the operators and the railroad company.

Extra Heavy Rails for Big Engines and Cars.

It is announced that the Pennsylvania Railroad has laid extra heavy rails, weighing from 125 to 130 pounds per yard on nearly half the distance between Baltimore and New York (the total being about 180 miles), 44 per cent of the main line now having such rails. These extra strong rails have been put in the track, replacing 100-pound rails, at points where the strain of the heavy cars and engines now used is most experienced, for instance, on curves and at terminals, as well as elsewhere. Altogether on these and other divisions the Pennsylvania Railroad has laid 705 miles of the new and heavier track.

Appointments.

H. S. Jones is reported appointed chief engineer of the Gulf, Mobile & Northern Railroad to succeed L. W. Duffee, who has taken up other work for the company.

P. O. Wood, according to a report from Memphis, Tenn., has been appointed assistant general superintendent of motive power of the St. Louis-San Francisco Railroad. He has been division superintendent at Memphis for two years. His successor there is J. F. Liston. H. L. Worman is general superintendent of motive power.

New Equipment.

Missouri Pacific Railway has ordered 25 Mikado type locomotives from the American Locomotive Co.

Louisville & Nashville Railroad has ordered 2000 steel hopper cars of 55 tons capacity—1500 from the American Car & Foundry Co. and 500 from the Mount Vernon Car & Manufacturing Co. This system is also reported in the market for 35 locomotives.

Sewell Valley Railway is reported in the market for 50 hopper cars and the District of Columbia Commissioners for three flat gondola cars of 55 tons capacity.

Wheeling & Lake Erie Railway is reported to have ordered 2500 freight cars, the contract being divided between the Pressed Steel Car Co. and the Standard Steel Car Co.

To provide for purchasing 20 Mallet super-heater freight locomotives, 5 ten-wheel switching locomotives and 1000 steel coal cars of 100 tons capacity the Chesapeake & Ohio Railway has sold through Kuhn, Loeb & Co. and the National City Co. of New York, \$4,500,000 of 6½ per cent equipment trust certificates issued by the Commercial Trust Co. of Philadelphia. It is stated that they sold on from 6.70 to 6.85 per cent basis, according to maturities, the earliest (four years) bringing the higher price and so on to 15 years.

Will An Important Oil Field Be Developed in Arkansas?

Eldorado, Ark., November 26—[Special.]—Interest in Union county's oil and gas possibilities has been greatly revived during the last two weeks. Lease men, scouts and geologists have given it the appearance of a real oil center, and a building revival has set in. The town is now using gas from the Constantin well, and drillers on other wells are being supplied with gas for fuel. This well is one of the most remarkable in the country. Recent gauges show it to be making 22,000,000 cubic feet of gas daily, yet in the hole are 100 sacks of cement, a drill stem, battered casing and other junked material. Oil drips from holes in the pipe, and oil men believe it produces about 15 barrels of oil daily.

The Constantin Refining Co.'s No. 2 is supposed to have reached a sand at about 1323 feet. At that depth casing has been set. The sand is thought to be the same as that found at Homer and in other wells drilled in this county it has not been tested.

The White Oil Corporation is drilling an offset to the gasser, and one-quarter of a mile northwest of it the Home Oil Co. of Eldorado has 6x6-inch casing set at 1800 feet, at which depth the company contemplates giving it a shot.

Walter George and associates of Shreveport have contracted for the drilling of two wells, and derricks are being erected for them in section 6, which adjoins the section in which the Constantin gasser was drilled. They have contracted also for a test in section 2. Among other Shreveport men entering this field lately were Woody Bros. and William Rose.

The Trinity Petroleum Co., pioneer company of the field, is preparing to drill four miles south of the gasser and between the gasser and the well of the Union Petroleum Co., which recently found an oil sand at 470 feet.

Walker and associates, who have drilled one dry hole on their block of over 6000 acres, will drill another on the block. The Quaker City Oil Co. also is to drill a second well, and may resume drilling in its abandoned No. 1. The locations are four and a half to five miles northeast of the Constantin gasser. W. R. Ramsey, Oklahoma City operator, is reported preparing to drill on a 40-acre lease in the Constantin territory.

Nearly all land in the county has been leased, and lately there has been little trading in leases. A dozen or more of the big Mid-Continent companies have holdings. The Standard Oil Co. of Louisiana has two blocks in the county and some in adjoining counties.

Prospecting for Oil in Tennessee.

Memphis, Tenn., November 26—[Special.]—Two tests are promised soon in Stewart county, Tennessee, about 120 miles northeast of Memphis and between the Cumberland and Tennessee rivers. One is to be drilled by Don Lawhead and A. R. Hale of Oklahoma City and the other by the Chicago & Gulf Oil Co., Inc., of Oklahoma City. The latter is located near the Tennessee River, in the southwestern part of Stewart county, and the Lawhead-Hale about midway northeast between that location and the town of Dover, on the Cumberland.

The latest and most approved geological report of the territory, a large part of which is a divide between the two streams, was made by Dr. L. C. Glenn, geological instructor in Vanderbilt University at Nashville. He predicts discovery of blue shale or the Chattanooga lime at 500 to 600 feet. This is the producing formation in the Bowling Green (Ky.) field. The Trenton formation, which produces in Ohio and Illinois, is expected at about 1150 feet.

The region is known as the Highland Rim. On the east, near Dover, and not far from the scene where General Grant issued his unconditional surrender order to General Buckner, a well is drilling. The Chicago-Gulf test is on what is known as the Moltke structure, and the Lawhead-Hale test on the Standing Rock structure. That near Dover is the Bear Creek structure.

J. R. Hammile and C. M. Weakley of Shelbyville, Ill., and New York associates have two wells started just north of Stewart county. These are several miles separated east and west. The total of five wells will test the best locations of the Highland Rim county, and they nearly completely surround it.

LUMBER AND BUILDING MATERIALS

Enormous Stock of Southern Lumber on Hand.

New Orleans, La., November 26—[Special.]—Some interesting facts relative to production and supply of Southern lumber were presented to the Senate Committee on Reconstruction by J. E. Rhodes, secretary-manager of the Southern Pine Association, at its hearing last week. His topic was "The Supply of Lumber."

Mr. Rhodes said, in part: "It is hardly necessary to take more of your time than to say that manufacturers of yellow pine in the Southern States can furnish all the lumber necessary to meet any demand that is likely to develop for the construction of homes and industrial buildings in this country. The producing capacity of the Southern pine mills is enormous, and has never been utilized to the utmost, even to supply the demand of the Government for lumber for war needs. We have a record of more than 5300 sawmills located in the Southern pine-producing territory, from Virginia to Texas, extending across the Gulf States. The great majority of these are, of course, small mills, only 400 mills representing about 60 per cent of the product. The production of Southern pine lumber in 1918 was 10,845,000 feet, according to the figures of the Forest Service. Last year it was about the same.

"There has been a gradual increase in the amount of lumber on hand since last fall, so that the total stock of the mills reporting to the association now amounts to 1,355,236,351 feet. There has been an increase in the total stock reported by the association of 421,989,737 feet, or 45.22 per cent over the amount reported held by the same mills November 1, 1919.

"Therefore, so far as the supply of Southern pine is concerned, the very greatly delayed building program of the country need not be postponed or restricted because of the shortage of lumber necessary for all construction purposes."

Activities of Southern Pine Mills.

New Orleans, La., November 26—[Special.]—Reports of the Southern Pine Association on the activities of 152 mills in the South for the week ending November 19 are as follows:

	Cars.	Feet.
Orders on hand beginning of week.....	11,114	242,740,874
Orders received during week.....	3,267	71,354,547
Total.....	14,381	314,095,421
Shipments during week.....	2,709	59,167,269
Orders on hand end of week.....	11,672	254,928,152
	Total Feet.	
Orders.....	71,354,547	
Shipments.....	59,167,269	
Production.....	59,546,185	

Shipments were 64 per cent below production for the week. Orders exceeded production by 19.83 per cent, and exceeded shipments for the week by 20.60 per cent.

The production was 36.81 per cent below normal. Shipments were 37.21 per cent below normal, and orders were 24.28 per cent below normal production. The increase in "orders on hand" during the week amounted to 5.02 per cent.

Fighting Forest Fires with Aid of Aircraft.

Washington, D. C., November 29—[Special.]—Millions of dollars' worth of valuable timber has been saved the Government during the season just closed by the use of airplanes in forest fire fighting. Fires can be so accurately plotted by wireless from the planes that fire fighters can be directed to within a quarter of a mile of the exact location.

Plans are now being made for the enlargement of the airplane patrol service for next season in Western States. It is also proposed to employ navy dirigible balloons for transporting fire-fighters from the fire control stations to the fire. Men, with all equipment, will be loaded into the dirigible, taken directly to the scene and dropped by means of a long rope ladder.

Aside from the saving of millions of dollars to the nation, the service is training for future emergency scores of army flyers.

District of Columbia Buys 2,500,000 Bricks.

Washington, D. C., November 26—[Special.]—Upwards of 2,500,000 building bricks will be used in the construction of the Gallinger Hospital being erected here at a cost of nearly \$2,000,000 by the District of Columbia Commissioners. Building contracts have been awarded for the first group of buildings comprising the hospital, and materials are being received in large quantities.

About 2,315,000 common building brick will be supplied by the Hudson Cement & Lime Co. of Baltimore, and more than 100,000 arch brick will be supplied by West Brothers Brick Co. of Washington.

Kentucky Brick and Tile Conditions Improved.

Louisville, Ky., November 29—[Special.]—General conditions in the brick and tile situation are much improved. Demand continues good; labor is more plentiful than for some months, and wages are somewhat lower. Prices have recently been reduced for coal from both Eastern and Western Kentucky, the average price now being about \$6, as against former prices of \$8.50 to \$9 in the Western section and from \$10 to \$12 in the Eastern section. Prices for brick and tile remain steady, and there will probably be no change until next spring, if then.

Large Brick and Tile Plant for Nitro, Va.

Charleston, W. Va., November 27—[Special.]—A large tract of land in what is known as Area M of the former Government powder plant at Nitro, near this city, has been sold to the Nitro Brick & Tile Co., organized under the laws of West Virginia. This company will begin operations early in the spring and will engage in the manufacture of building brick, fire brick and tile. According to present plans four kilns will be built immediately but additional kilns will be built as soon as production is initiated. Even at the outset, it is asserted that production will be at the rate of 30,000 bricks a day. Much of the product of the new company will be utilized by companies established and to be established at Nitro. It is estimated that fully 15,000 fire bricks a day can be used covering a period of a year in connection with building projects within the Nitro area. Many millions of building brick will be needed. The industries already established at Nitro are so varied that many plants are able to use the products of other plants in the same neighborhood and in fact depend on other plants for their raw product.

Cement Prices Firm and Production Heavy.

The country's production of cement this year, estimated at about 95,000,000 barrels, is short of the actual requirements by a considerable margin, according to John A. Morron, president of the Atlas Portland Cement Co.

The principal factors hindering production have been labor troubles and coal shortage, but conditions have recently improved. Prices of coal have dropped and delivery is more certain, although many mills have not made contracts for next year's supply owing to unsettled conditions. However, prices of cement will probably remain at near their present level for many months, probably well into 1922, and no over-production of cement is anticipated for 1921; in fact, indications now point to a scarcity of it.

Despite the acute shortage of cars for shipping cement there is little stock on hand at most of the mills, due to the extent to which automobile trucks were employed by contractors and builders to get the material moved quickly and thus not delay construction projects. It is said that from 40 to 50 per cent of the output of many plants was handled by trucks.

Cement mills report few cancellations, as might be expected if consumers looked for a reduction in prices in the near future.

The highest production of former years was that of 94,552,296 barrels in 1916. Despite the fact that in September production at the mills was 10 per cent greater than during the same month last year, and 45 per cent over 1918, the supply ready at the mills is half what it was last year and 40 per cent of 1918 stocks.

President Markham Forecasts Building Boom.

New Orleans, La., November 29—[Special.]—A rapid readjustment of business conditions is looked for by C. H. Markham, president of the Illinois Central Railroad, who visited here last week.

"The country is rapidly adjusting itself to the conditions that followed the war," said Mr. Markham. "Business men have been disposing of their high-priced stocks and the shelves are becoming bare. The time of replenishing these shelves cannot much longer be delayed. That will start the business revival for the wholesalers.

"The housing conditions throughout the country are such that the building program must be started soon. I do not think it can be delayed much beyond the first of the year.

"When this construction period starts, I predict that it will affect all lines of business. At the beginning, the chief beneficiaries, of course, will be the three big items of lumber, steel and labor, but all other lines of business will rapidly fall into line, and there will be, I think, general prosperity, in which the South will participate as greatly as any other part of the country."

Birmingham Yellow Pine Market.

Birmingham, Ala., November 29—[Special.]—In addition to this city being a large coal and pig-iron market, it ranks high as a yellow pine market. The approximate yearly shipments total 40,000 cars, and, despite the general depression of the past few months, it is believed that this year's total will nearly equal this amount, according to Harry Watters of the Watters-Tango Lumber Co. The lumber that passes through this city comes from various parts of Alabama and from the other lumber-producing States in the South.

There are about 25 wholesale lumber men engaged in this business. The Wholesale Lumbermen's Club has been organized, permitting co-operation of all the members.

During the past few weeks business has steadily increased, and there are many signs of greater activity. A revival of business on an extensive scale is expected early in the spring. It is believed here that there will be a big demand for high-grade lumber, and that prices of building materials will generally tend to be higher.

Solving Housing Problem in Oklahoma Town.

Henryetta, Okla., November 22—[Special.]—To take care of the wage-earners coming in and those already here, the Henryetta Chamber of Commerce has organized a \$50,000 building fund for the purpose of erecting four and five-room cottages and selling them to the workmen on the easy-payment plan. It is proposed to sell the house and lot at a price of \$2500, the purchaser paying \$300 down and \$35 per month until fully paid, the deferred payments bearing 8 per cent interest. The \$50,000 fund was raised by a whirlwind campaign of two days, in which a brass band, luncheon and patriotic speeches played a prominent part. An officer of each of the four banks and the president of the Chamber of Commerce will act as trustees of the fund without pay. A committee of business men made a house-to-house canvass, distributing literature boosting the plan. Where they found an individual who would build outside of the fund his name was taken, together with the plans of his house, and the pledge given to the secretary for publication.

Lumbermen Against Metric System.

Washington, D. C., November 26—[Special.]—That lumbermen are opposed to the adoption of the metric system is shown by a resolution recently passed by the executive committee of the New Jersey Lumbermen's Association of Newark, N. J., as follows: "The New Jersey Lumbermen's Association is decidedly and unanimously opposed to the adoption of the metric system. It is felt that the adoption of this system would result in endless confusion and great expense, and there is no necessity for a change in our system of weights and measures. On this same subject the board of directors of the National Retail Lumber Dealers' Association of Chicago, Ill., in stating its position, says: "Absolutely and positively opposed to the proposed metric system, and in favor of our present system of weights and measures."

Beaumont Shingle and Lumber Mill Purchased.

Beaumont, Tex., November 27—[Special.]—Charles Sigler and associates have purchased the properties of the Beaumont Shingle & Lumber Co. here. The transfer includes a sawmill, planing mill, drykilo and shingle mill on Brakas' Bayou, and about 4,000,000 feet of timber in Orange county, of which amount only about 2,000,000 feet is contract timber.

Complete plans have not been announced, but it is believed that extensive additions will be made to the property.

To Cut Timber After Forestry Board Plan.

Princess Anne, Md., November 27—[Special.]—A tract of 800 acres of timberland near this place will be cut under a plan suggested by the State Board of Forestry. Armstrong & Gladden of Pocomoke City will use modern timber methods in handling this tract, probably using tanks purchased from the War Department for skidding logs. This operation will be one of the largest ever conducted in the State, considering the area, the total amount of timber involved and the purchase price.

It is one of the finest stands of timber in Maryland, consisting of about 75 per cent loblolly pine and the remainder hardwood of various kinds. The most important consideration in regulating cutting was to secure satisfactory pine reproduction, and accordingly four pine seed trees about 12 inches in diameter are to be left per acre as evenly distributed as possible, and all other trees to be cut clean. The brush will be disposed of by burning or by scattering, depending upon the amount of natural reproduction upon the area.

Two States Exempt New Dwellings from Tax.

The legislative assemblies of New Jersey and New York recently passed laws providing for the exemption from taxation of dwellings erected after the passage of the acts. The New York law authorizes the city, town, or county, to provide for exemption if it so desires; while the New Jersey law provides (with an exception noted) that taxes shall not be levied upon dwellings erected during the next five years.

Both laws are printed in full as follows:

Chapter 949, Laws of the State of New York:

An Act to amend the tax law in relation to the exemption from local taxation of new buildings planned for dwelling purposes.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Chapter 62 of the Laws of 1909, entitled "An Act in relation to taxation, constituting Chapter 60 of the consolidated laws," is hereby amended by inserting therein a new section, to be Section 4-b, to read as follows:

Section 4-b. Exemption of New Buildings from Local Taxation. The legislative body of a county, or the legislative body of a city with the approval of the Board of Estimate and Apportionment, if there be one in such city, or the governing board of a town, village or school district may determine that until January 1, 1932, new buildings therein, planned for dwelling purposes exclusively, except hotels, shall be exempt from taxation for local purposes other than for assessments for local improvements during construction and so long as used or intended to be used exclusively for dwelling purposes, or if a building of four stories or more in height, used exclusively for dwelling purposes above the ground floor, provided construction was completed since April 1, 1920, or, if not so completed, that construction be commenced before April 1, 1922, and completion for occupancy be effected within two years after such commencement, or if now in course of construction within two years after this section takes effect.

Sec. 2. This Act shall take effect immediately.

Chapter 355, Laws of 1920, State of New Jersey:

Whereas, The cessation of building during the great war has created a shortage of dwelling houses throughout the State, and congested housing conditions resulting therefrom have seriously affected and endangered the public welfare, health and morals; and,

Whereas, On account of the high costs of construction growing out of the great war and conditions resulting therefrom, private capital has been unwilling to undertake the construction of dwelling houses sufficient to meet the public emergency caused by such conditions; and,

Whereas, It is deemed necessary to encourage the investment of private capital in the construction of dwelling houses during such emergency; and,

Whereas, the measure hereinbefore set forth, by its terms and provisions, will not in any way reduce the amount of returns receivable from present rates throughout the State, and will eventually result in a greatly increased volume of rates. Therefore, be it enacted by the Senate and General Assembly of the State of New Jersey:

1. No taxes shall be levied, assessed or collected for a period of five years from October 1, 1920, on any improvements to real estate which may be erected between October 1, 1920, and October 1, 1922, for dwelling purposes; Provided, that if, during said five years, improvements for dwelling purposes, greater in value than the existing improvements shall be placed upon any real estate, the amount of assessments on such improvements shall in no case, except that of damage through action of the elements, sufficient to warrant a reduction, be less than the assessment for improvements thereon existing at the date of the passage of this Act.

2. This Act shall take effect immediately.

Building Boom Foreseen by Kansas City Dealers.

Kansas City, Mo., November 29—[Special.]—Lumber dealers here say that as a result of recent reduction in lumber prices a big building boom is imminent. Prices have been reduced from \$5 to \$12.50 a thousand feet, depending upon the grade, by local retailers. These reductions bring prices to 50 per cent below those prevailing last February, when lumber prices were about at their highest. The greatest reduction has been in lumber such as 2x4, 2x6 and 2x8. Prices for finish, partition, flooring, etc., is firmer in price, and reductions amount to about \$5 a thousand for these items.

With the new prices established on Southern pine, \$125 for flooring, \$100 for finish, \$57.50 for boards and \$41.50 for dimension, retailers declare the "rock bottom" in price has been reached. It is expected that even before the opening of spring, building activities will be resumed on a large scale, due to the low prevailing prices.

Hardwood and Cypress Mill for Lake Charles, La.

Lake Charles, La., November 27—[Special.]—A new sawmill with a capacity of from 45,000 to 50,000 feet of lumber daily will be placed in operation here within the next few weeks by the R. L. Martin Hardwood & Cypress Manufacturing Co. About 100 persons will be employed. Construction work began last July, and, with the exception of the installation of a few minor pieces of equipment, the mill is complete and ready for operation.

Hardwoods and cypress will be manufactured principally, but some pine will be cut. The company owns a large hardwood tract on the Calcasieu, which will be cut and logged to the mill.

Good Demand for Building Materials at Memphis.

Memphis, Tenn., November 27—[Special.]—There is an active demand in this vicinity for bricks, tile, terra-cotta products, sewer pipe, cement and lime and other similar materials, due to the large number of construction projects under way in the vicinity. Labor is more plentiful, and the financial outlook is brighter than for some time.

Because of the good weather conditions, it is expected that a large number of building operations will continue throughout the fall and winter, thus creating a steady demand for materials of all kinds.

Home-Building Campaign for Hugo, Okla.

Hugo, Okla., November 29—[Special.]—With a view to relieving the shortage of houses in this town, the Chamber of Commerce plans to organize a building and loan association to encourage home building. To aid in the campaign, miniature houses are being constructed in the manual-training department of the high school, to be displayed at the Chamber's offices.

Large Earnings on the B. & O.

The statement of the Baltimore & Ohio Railroad Co. for October shows railway operating revenues of \$25,015,394.82, an increase of \$6,097,626.49, as compared with October of 1919; railway operating expenses, \$21,101,400.50; increase, \$5,688,296.47; net revenue from railway operation, \$3,913,994.32; increase, \$409,330.02; railway operating income, after tax accruals and uncollectible items, \$3,367,967.61; increase, \$330,591.52; net income after rents, \$2,881,282.41; increase, \$1,349,825.82.

Views of a Texas Author and Preacher.

W. A. JARREL, Dallas, Tex.—The statements and the position of the MANUFACTURERS RECORD are almost invariably correct and true. Its spirit and its statements are the tonic that the great business, the great political body and the church need. With a wide acquaintance of other magazines and other publications, I say, unhesitatingly, it has few equals and no superior. Were it read by all business men, by all citizens, by all politicians and by all preachers, or by even the greater part of them, Gompersism and all the forms, phases and developments of Bolshevism could make no headway against our country.

Commendations, Kicks and Comments

Exerting a Splendid Influence.

W. S. RAMSAY, President Bay City Dredge Works, Bay City, Mich.—During the past we have very much enjoyed many of your articles of general interest, and have heard most favorable comments in many sections of the country regarding your policy. Unquestionably the MANUFACTURERS RECORD is exerting a splendid influence on account of its broad, strong policy on national affairs.

Would Make It Unanimous.

JAS. B. HEDGE, Hedge Publishing Co., Athens, Tenn.—I enclose herewith check for renewal of my subscription. I have no papers or magazines that I think so highly of as the MANUFACTURERS RECORD. In my estimation it strikes the spot for a red-blooded American publication, and I would like to see its circulation equal to its deserts, which, however, would make it almost unanimous.

Sends Many Thanks.

WELSH BROS., Ringgold, La.—Enclosed please find our check for \$6.50 as renewal from time past due for one year. As you have had some of your subscribers not in accord with your stand on the League of Nations, it is nothing but right that those who did approve should compliment you, and here is one that returns you many thanks for the grand stand, nobly won in this, and many others you have taken since 1914.

Some Requirements for Any Treaty We May Sign.

T. M. DIX, Decatur, Ala.—I have pleasure in enclosing you herewith my check for \$6.50, covering renewal of my subscription to November 16, 1921.

I read your valuable paper with much appreciation of the strong and clear spirit of Americanism which you set forth in every issue.

I agree absolutely in the strong opposition which you have maintained against the League of Nations and the Godlessness of the Peace Treaty of Versailles. As a staunch admirer of the sincerity and wisdom of President Wilson, I have been utterly unable to reconcile his willingness to have the United States of America subscribe to and support a document wrought out in a conference which did not acknowledge the supreme leadership and direction of Almighty God in all national matters, and I trust that our people as a whole will insist that whatever treaty we do sign and ratify shall be entered into with prayer, and shall express our allegiance to Almighty God and our faith in Jesus Christ.

One Advocate at Least for Federal Reserve Board.

E. R. HAMILTON, General Manager Northwestern Steel & Iron Works, Eau Claire, Wis.—We are just in receipt of yours of the 12th, calling our attention to your magazine and in particular to the article entitled "Go Forward." In reading over this article, we note two statements, which are as follows:

"The Federal Reserve Banks killed this prosperity and brought us to the present conditions." Also, "Notwithstanding the fact that the work of the Federal Reserve Board has temporarily halted business very seriously."

Frankly, the writer thinks this is the most asinine statement that he has read for some time. To blame the present conditions to the actions of the Federal Reserve Board is absolutely ridiculous, and if it were not that we are fortunate enough to have a Federal Reserve Bank, we most certainly would have today the most severe panic the country has ever seen.

While Men Live They Must Fight for the Right as They See It.

J. E. CRAFTON, JR., Charlotte Court House, Charlotte, Va.—I am herewith enclosing to you my check for \$3.50, and will thank you to continue sending me the MANUFACTURERS RECORD. I would send the amount of a year's subscription, but I, with several others, am raising a purse, the proceeds of which are to be applied to the purchasing of a pair of boots for President-elect Harding to use on the 5th day of next March. Will you not furnish us with brass tips to be fitted on the toes of these boots? If Mr. Harding will use these boots as we intend that they shall be used, I'm sure the people, as well as Mr. Harding, will get a great deal of genuine satisfaction out of them, and by doing so he will make them serve as a great benefactor to the country.

Keep up your good work! Your sound doctrine is the very salvation of the country today. Don't quit the "ring" until you have knocked out every peanut-head bureaucratic commissioner in Washington. More business in Government and less Government in business seems to be our only panacea.

I read every word of the MANUFACTURERS RECORD and then lend it to my several friends in town to read, and all are with you in your fight for better living conditions, fair prices and America FIRST. So long as you live, so long will you fight; so God bless you until the end.

Good Roads and Streets

OVER \$300,000,000 FOR HIGHWAYS IN SOUTH

Total of Billion Dollars Made Available for Highway Work in Country During Past Three Years—Southern and Southwestern States Take a Leading Part in Good Roads Movement.

Southern States have made available for road work through taxation, bond issues and through receipt of Federal aid well over \$300,000,000 of a total of \$1,000,000,000 now available for road improvement and maintenance throughout the country.

Representative of the amounts allocated to this work by Southern States during the past few years there has been made available the following approximate amounts: West Virginia, \$57,000,000; Missouri, \$60,000,000; Virginia, \$50,000,000; Texas, \$86,000,000; Alabama, \$30,000,000; Mississippi, \$16,000,000; Georgia, \$15,000,000; North Carolina, \$14,000,000; Tennessee, \$7,000,000; Louisiana, \$6,000,000; Kentucky, \$2,000,000; Maryland, \$5,000,000; Florida, \$1,750,000, and other States varying amounts.

More than a billion dollars is now available for road building and maintenance in the United States, and of this amount approximately \$550,000,000 will be expended in 1921.

During the past three years State bonds for making highway improvements aggregating \$538,000,000 have been authorized. In 1918 Illinois authorized bonds amounting to \$60,000,000 and Pennsylvania authorized a total of \$50,000,000. During 1919 the following issues were authorized: Michigan, \$50,000,000; California, \$40,000,000; Oregon, \$12,500,000; Maine, \$10,000,000; North Dakota, \$4,500,000; Utah, \$4,000,000; Wyoming, \$2,800,000, and Nevada, \$1,000,000. Thus, \$124,800,000 bonds were authorized during the year for road improvements. During 1920 the following highway bonds were voted: Minnesota, \$75,000,000; Missouri, \$60,000,000; West Virginia, \$50,000,000; Virginia (Legislature to fix amount), \$50,000,000; New Jersey vehicular tunnel, \$29,000,000; Alabama, \$25,000,000; Oregon, \$10,000,000; Colorado, \$5,000,000; Maryland, \$3,000,000, and Idaho, \$2,000,000. The total voted during this year amounted to \$309,000,000.

Of this amount, five States on November 2 voted highway bond issues aggregating \$192,000,000, a sixth passed a constitutional amendment enabling the State Legislature to vote bonds to the extent of \$50,000,000, and a seventh passed a constitutional amendment authorizing the State to act without specifying the amount. The States voting issues in November were Missouri, Minnesota, West Virginia, Colorado and Idaho. Kansas adopted an act empowering the Legislature to act, and Virginia directed the Legislature by a referendum to vote bonds to the extent of \$50,000,000.

During the past year bond issues have been authorized in the various counties and cities in the United States amounting to nearly \$362,000,000. The approximate amounts authorized in each State in this manner are as follows:

Alabama, \$5,000,000; Arizona, \$8,400,000; Arkansas, \$2,400,000; California, \$24,635,000; Colorado, none; Florida, \$1,515,000; Georgia, \$15,246,000; Indiana, \$7,373,000; Illinois, \$8,862,845; Iowa, \$18,475,000; Kansas, \$50,000; Kentucky, \$1,700,000; Louisiana, \$5,850,000; Maine, none; Michigan, \$2,390,000; Minnesota, \$12,800,000; Mississippi, \$5,773,000; Missouri, \$13,504,000; Montana, \$6,283,000; Nebraska, \$5,000,000; Nevada, \$1,200,000; New Mexico, \$300,000; New Jersey, none; North Carolina, \$13,609,000; Oklahoma, \$1,158,000; Oregon, \$9,696,704; Pennsylvania, \$21,337,503; Rhode Island, \$8,500,000; South Dakota, none; Tennessee, \$7,185,000; Texas, \$86,023,000; Vermont, \$2,766,000; Washington, \$8,225,000; West Virginia, \$7,039,200; Wisconsin, \$36,525,000; Wyoming, \$2,800,000.

It is estimated that approximately \$160,000,000 of Federal-aid funds is still available for completing road-building projects in the various States. This, together with funds obtained from bond issues, from direct taxes and other sources of State revenue, automobile licenses, etc., county bond issues and appropriations, will, it is estimated, make available for expenditure a total of more than \$1,000,000,000.

Quite naturally all of this enormous sum will not be expended during the coming year, but indications point to expenditures totaling more than \$500,000,000 in construction of new road and the maintenance of established highways in 1921.

With labor and materials more plentiful than for many months, new road work has already been vigorously started in many of the States, particularly in the South. As the motor truck is being increasingly used to supplement the railroads, not only in the

transportation of farm products, but in the efficient and quick handling of manufactured products of every kind, the necessity for good highways is being realized more and more. Hence, today the country is entering upon a road-building campaign of gigantic proportions which cannot but reflect in general activity in practically every line of building activity. Cement manufacturers are working their plants at as near capacity as possible, and prices are very firm. Similarly with sand and gravel, the demand is very near production and often exceeds it, with a result that the plants throughout the country are generally active, and prices remain steady. Likewise with brick and other road-building material manufacturers, the coal and car shortage of the past year has hampered production and delivery of materials, and there is not a big stock of these supplies on hand.

Naturally, with little or no oversupply of road-building materials, and with the launching of these big projects, activity will be reflected in the various plants, and thousands of men will be given employment.

\$7,000,000 for South Carolina Highways in 1921.

Columbia, S. C., November 29—[Special.]—The program before the State Highway Commission for the coming year involves the expenditure of \$6,000,000, it was announced here this week. This includes Federal-aid road and bridge building to be paid, projects to be partly completed, maintenance of present highways and construction of new roads from automobile license funds and the two-mill highway tax. It does not include the construction of roads the contracts for which have already been awarded and which will be completed during 1921 at an additional cost of \$1,000,000. This would bring the total to \$7,000,000 for the year.

South Carolina has not used half of its Federal-aid apportionment as yet. It has used \$1,160,000, but \$1,362,864 is still available before June 30, 1921. For the year ending June 30, 1922, the State will have \$1,436,019 of Federal aid available.

In the road program for 1921 is included one-half the cost of erecting four large steel bridges—the Santee bridge, to cost \$850,000; the Pee Dee, to cost \$300,000; the Sand Bar Ferry bridge, to cost \$260,000, and the Wateree bridge, to cost \$150,000. The total cost of these bridges will be \$1,560,000, of which half, \$780,000, is included in the 1921 highway program.

South Carolina Road-Building Program Large.

Columbia, S. C., November 26—[Special.]—South Carolina will make more rapid progress in building a real State highway system during the coming year and the next few months than in any previous period, if plans of the State Highway Commission are carried out. The Highway Commission has been diligently at work throughout the past year, but its real program is just now being gotten under way. Authorities of the department say that \$6,000,000 worth of work will be under construction within the next few months. Not only is the commission building highways in co-operation with the counties, but it also has directly under its control for maintenance at the present time approximately 500 miles of highway.

To Draft Good-Roads Bill for North Carolina.

Raleigh, N. C., November 26—[Special.]—A meeting of the committee appointed by the Citizens' Highway Association to draft a State-wide bill for hard-surfaced roads will meet here December 7 in the library of the Supreme Court. Heriot Clarkson is chairman of the committee, which will endeavor to get all possible information on the subject. It will probably be in session several days, and the bill will be completed for the consideration of the General Assembly in January.

Will Hard Surface Eight Miles of Florida Road.

Daytona, Fla., November 29—[Special.]—As a result of a conference between State and county authorities, eight miles of road in Flagler county are to be hard surfaced. Work will be started immediately. After grading and shaping six inches of coquina rock will be used. The Flagler County Commissioners will furnish the rock and Volusia will furnish a tractor and grader for the work.

Maryland to Undertake Snow Removal from State Highways.

Snow removal will be undertaken for the first time in Maryland by the State Roads Commission this winter. As outlined, the system to be kept free from snow totals 475 miles, and the experience and cost of the work will determine the future advisability of continuing it. It is probable that the cost of snow removal will be more than offset by the saving in road repairs in the spring, because considerable damage is done by permitting snow and hail to remain on the roads for any long period.

Other States, particularly in the East, are keeping their main highways open to traffic during the winter. The Pennsylvania Highway Department reports that the cost of removing snow during the past four years has ranged from \$50 to \$200 a mile, depending entirely, of course, upon the amount of snow that had to be removed. It is believed that the cost in Maryland will be lower than in Pennsylvania because of the lesser snowfall.

The commission has on hand a sufficient number of automobile trucks to maintain effective snow removal on the main highways from Oakland, Keyser, Cumberland, Hagerstown, Frederick, in Western Maryland, to Baltimore, on the Belair road, to the Delaware line in Prince George's, Charles and St. Mary's counties; from Washington to Point Lookout, and on the highway in Anne Arundel and Calvert counties from Annapolis to Solomon's Island, and on other important thoroughfares. On certain of the roads the same equipment that is used during the summer to keep the roads in good condition will be used to remove the snow. Hence the only additional expense incident to this work will be the cost of operating the trucks and chauffeurs' pay.

It is planned to arrange with the Weather Bureau to have its daily reports sent to all parties connected with this work. Storm warnings will be sent to the commission's office and wired throughout the State, so that equipment can be quickly placed in use and attempts made to remove the snow as soon as the storm starts. It is thought that the roads can be effectively kept clear only by beginning before any great amount of snow falls.

The only additional expense that will be incurred in this work will be the cost of snow plows. Twenty of these will be required, costing complete about \$300 each.

Georgia Highway Improvements Being Speeded Up.

Atlanta, Ga., November 26—[Special.]—The State Highway Department is rushing to completion the portion of the Dixie Highway in this State. If the program is fulfilled, this section of the route will be one of the first completed. There are now 125 road projects under way, and the several projects along the Dixie Highway are but a small part of the total.

Construction has begun or will be started shortly in all of the 20 counties traversed by the highway. Between Hawkinsville and Abbeville there has been constructed a reinforced concrete bridge 600 feet long, eliminating a serious break in the continuity of the route. A similar bridge is being constructed over the Ocmulgee River at Hawkinsville.

The various counties are building roads of sand-clay, concrete and macadam running from the Tennessee line to the Florida line. Their completion will provide one of the best stretches of highway in the country, not only for tourists, but for Georgians as well. The scenery along the roads comprises almost every variety from the rugged Blue Ridge Mountains to the marshes by the sea.

Inland Waterway to Beaufort, N. C., Complete.

Norfolk, Va., November 29—[Special.]—The Beaufort section of the Chesapeake and Albemarle Canal, part of a continuous waterway from Baltimore and Philadelphia through Norfolk to Beaufort, N. C., was officially opened today. It also assures to vessels bound to sea a safe passage past Hatteras, since Beaufort is beyond that treacherous point to American shipping.

The official ceremonies were held at Great Bridge, Norfolk county, where the last section of the canal begins. J. Hampton Moore, Mayor of Philadelphia, and Congressman John H. Small of North Carolina were the principal speakers. The completion of the canal will really give vessels an inland route from Boston to Beaufort, N. C., it was said.

Analyzing the Sub-grade in Relation to Highway Failures.

Wilmington, Del., November 27—[Special.]—A technical analysis and general study of the causes of highway failures was taken up by engineers, highway officials and scientific men in leading universities at a meeting of the sub-grade committee of the Federal Highway Council held here last week under the chairmanship of Gen. T. Coleman DuPont of New York.

Among the scientific men attending were Prof. Hector J. Hughes, dean Harvard Engineering School, Cambridge, Mass.; A. T. Goldbeck, testing engineer, Bureau of Public Roads, Washington, D. C.; Prof. F. H. Eno, chair of engineering, Ohio State University; H. E. Hilts of the Pennsylvania State Highway Department; H. G. Shirley of the Federal Highway Council and Ira B. Mullis, Bureau of Public Roads, Washington, D. C.

Reports were made by problem committees working under a main committee. During the discussion which followed the presentation of these reports, the statement was made by W. P. Blair of Cleveland, Ohio, that 20,000,000 people had been added to the population of the United States, practically without one inch being added to the transportation facilities of the country, and that on top of this increased population was an increased tonnage due to greater buying by the people equal to another 20,000,000, making a total of practically 50,000,000 in the face of inadequate transportation. The result of this increased tonnage, it was asserted, had been to break down roads through no fault of construction, but because traffic growth had not been taken into full account.

The development of railways engineering was used as an example to show why heavier type highways must be built since the same law of tonnage growth applies to both the railway and the highway. In the case of railway, Mr. Blair asserted, the laying of heavier rails, enlarging tunnels and reducing grades, has been going on constantly during the past 30 or 40 years, and yet the highway without a comparative development, had been called upon within the last 10 years to sustain a traffic growth unequalled in any like period in the history of the country. The situation this created, it was pointed out, called for a determined effort to build better road foundation in order that breaks in the surface may be eliminated.

General DuPont followed Mr. Blair with the statement that the problem of the sub-grade, or road foundation, was the most important duty before highway engineers and officials today. It was his belief, as a result of experience in highway development, that the foundation problem must be solved and solved speedily, otherwise the movement to round out a complete system of county, State and interstate highway transportation will be retarded, to the great detriment to the American public.

C. M. Upham, State Highway Engineer of Delaware, explained how his department was making field tests to determine the bearing power of various kinds of soil and what methods to pursue in order to increase that sustaining power and thus prevent the breaking down of the road surface.

On the point of road failures, Mr. Shirley, former State Highway Engineer of Maryland, called attention to the fact that roads are sometimes charged with having failed, despite the fact that in actual service they may have saved their cost many times over before reaching the point where reconstruction becomes necessary. He hoped, he said, that the public would take this fact into account in their future discussions relating to road building.

S. M. Williams, Chairman of the Federal Highway Council, addressed the committee briefly upon the importance of conducting the sub-grade research work as rapidly as possible in order that road building upon a greater scale than ever before may go forward without wasteful expenditure of funds upon roads that soon prove unequal to the burden thrust upon them, through a lack of proper understanding of the soil upon which the sub-grade rests.

Investigations in widely separated sections of the United States are to be conducted simultaneously and reports made at subsequent meetings of the sub-grade committee. The work is under the direction of the Federal Highway Council, which hopes through the movement now undertaken to save millions of dollars to the public in the future in the construction of roads that will not fail.

Striving for Completion of Lee Highway.

Roanoke, Va., November 29—[Special.]—Plans are being completed for a convention to be held in Knoxville, Tenn., in January by the Lee Highway Association. Dr. S. M. Johnson, director, is actively interesting Tennessee business men in urging the completion of the portion of the highway through that State. The passage of the good-roads amendment to the Constitution of Virginia and the voting of a bond issue of \$500,000 for the construction of 27 miles of road in Fairfax county prepares the way for completing the route through Virginia. It is believed that within two years there will be a continuous modern highway from New York to Roanoke.

At the convention it is probable that the work will be placed on a national basis. The section of the highway from New York to Washington, 238 miles, is complete, and the Virginia section comprises 420 miles, mostly modern roads. The other sections are being constructed or financed for construction.

100 Streets to Be Paved in Dallas, Tex.

Dallas, Tex., November 24—[Special.]—One hundred streets are to be paved here as soon as possible. Conditions have been such since May 1 that little has been accomplished, but during this month conditions have changed, and the work will continue at an accelerated rate. Labor is more plentiful everywhere, and materials are being received with more regularity and in greater quantities than at any time during the present year. As a result, paving activities have increased many fold.

Other municipal and public utilities improvements have been greatly delayed because of scarcity of laborers at any price. Sand and gravel have been difficult to get, owing to car shortage and difficulties experienced in getting the material from the pits because of the rainy conditions that have prevailed. The stone quarries have been idle a good part of the time because of labor conditions, and cement and asphalt have been difficult to obtain in sufficient quantities.

During the past six weeks eight city streets have been completed and engineering work has been finished on 23 streets, which will soon be ready for paving, in addition to the work progressing upon 12 other streets.

Plea for State Roads as Measure of Civilization.

Charlotte, N. C., November 29—[Special.]—Judge T. D. Bryson of the Supreme Bench has appealed for a good-roads system with a view to serving the moral, religious, social, educational, industrial and agricultural needs of the State.

In part, he said: "Gibson, one of our famous historians, very aptly advises us that the character and civilization of any community can be properly judged by the class of roads it has. As North Carolinians we should solemnly ask ourselves the question, Are we willing that our civilization should be interpreted by the kind of roads and no roads which we have?"

"In the MANUFACTURERS RECORD, under date of November 11, we are advised that the citizens of the States of West Virginia and Virginia by an overwhelming majority have authorized and directed their general assemblies when they convene to issue \$50,000,000, respectively, for the development of these Commonwealths.

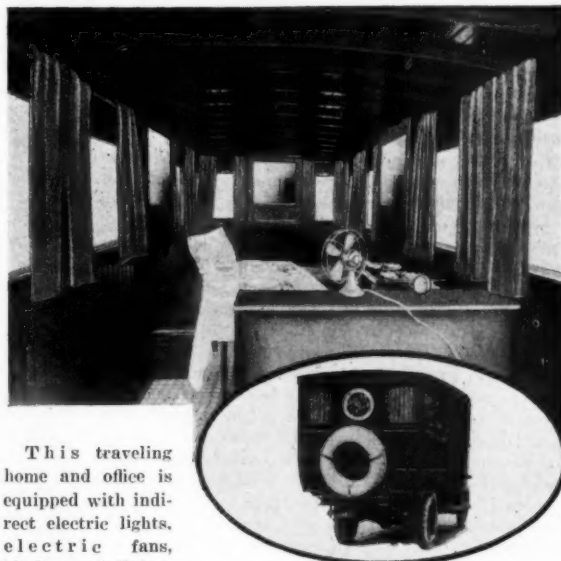
"I am just wondering whether the citizens of our State can content themselves with the small progress we are making in the construction of hard roads, or can we expect to compete with such States commercially, educationally, morally or otherwise unless the members of the General Assembly of 1921 and the Governor provide the necessary ways and means to develop North Carolina through the building of modern highways.

"Wherever people have good roads; can have free, easy, cheap and rapid communication, one with the other; have an exchange of thoughts and ideas, there is less disposition to lawlessness and wrong-doing.

"In my humble judgment, a State system of modern highways will do more to develop the general civilization of the State and benefit humanity in every phase and condition of life than any one factor"

Covers Eight Southern States with Motor Truck Office.

This illustration shows the motor truck office and traveling home which H. G. Dustman, Southeastern representative of the Stoughton Wagon Co., Stoughton, Wis., uses in covering his territory of eight Southern States. The special body was built by the truck division of the Stoughton factory and mounted on an ordinary 1½-ton truck chassis.



This traveling home and office is equipped with indirect electric lights, electric fans, kitchen and dining-room fixtures, a full-sized bed which folds up into a divan by day, upholstered window seats that cover steamer trunk clothes closets, and three mirrored toilet and medicine cabinets. The dining table is collapsible, and fits neatly beneath the bed when not in use. In addition to these conveniences, the truck carries a compact office set, including a filing cabinet and typewriter.

Mr. Dustman's headquarters are in Jacksonville, Fla., but the greater part of his time is spent in his wheeled home traveling through the States of North and South Carolina, Georgia, Florida, Alabama, Louisiana, Mississippi and Tennessee.

Notes on Oil-Drilling Activities in Southwest.

Drilling has been started in Columbia county, Arkansas, by the Homer-El Dorado Oil Co. of Shreveport, La., which leased a body of 1000 acres there. The tract is about midway between the Constantin gas well and the gas field at Spencer, La. The test is to be drilled to 3000 feet.

Childress, Tex.—E. R. Defenbaugh of Lancaster, O., and J. G. Shim of Newark, O., have purchased the interests in Childress county of the Mid-Texas Oil Co. of Denver. The company had three test wells under way in the county. The purchasers say that drilling will be resumed at once in all of the tests.

Amarillo (Tex.) has been selected as headquarters in Texas for the Columbus Oil & Securities Co., a \$1,500,000 Delaware corporation of which Thomas F. Turner has been named as statutory agent. The company is expected to drill wells in the Texas Panhandle.

A. M. White of New York and E. E. Bessire of Wichita, Kans., have become directors with Laurence F. Lee of Albuquerque, N. M., in the New Mexico Oil Corporation, which has a capital stock of \$750,000, which recently was chartered in New Mexico, and which is to have headquarters at Albuquerque.

An increasing number of charters issued by the Secretary of State to oil and gas corporations would indicate general activity in Oklahoma in a short time. As a majority of charters were issued to Tulsa companies, indications are that the eastern part of the State is due for great activity.

MECHANICAL

New Portable Crane of Crawler Type.

The picture herewith shows a new type of portable crane for handling bulk materials such as coal, cinders, sand, gravel, crushed stone, scrap iron, etc. It is moved from place to place under its own power and is known as the "Northwest Crawler Crane." For handling the lighter materials a bucket of one cubic yard capacity can be used; for those which are heavier a $\frac{3}{4}$ -yard bucket is employed to advantage. The machine embodies features unique and new in addition to others with which contractors are familiar.

Motive and lifting force is furnished by a 60-horse-power gasoline motor, mounted on a revolving platform, with a 30-foot boom and traction unit made up of heavy-duty crawling treads, operated with shifting gears to provide perfect steerage. The machine has its weight reduced to a minimum with a lifting power that is as great if not greater than usual. A number of these cranes are now at work in coal yards, on construction jobs, and in numerous places where the strongest possible tests are experienced.

The main feature of this new crane is its mobility. It steers as easily as a tractor or automobile truck, it is stated, and it is under the control of a single operator. It can do work requiring quick action without maneuvering for position or special preparation. The traction unit is so designed that by throwing a lever in the cab, the gear operating the traction on either side may be replaced with a smaller gear and the crane can thus make a complete turn in a minimum of time and without disturbing the pavement or material on which it is running. Perfect traction and steering are secured, it is said, on all conditions of surface. The perfect balance obtained by extreme lightness of design, together with a large power unit, enables the crane to maneuver regardless of obstacles.

The most flexible features of a gasoline engine drive in dredging or hoisting are overcome by having the hoisting drums, teamed with a brake drum with ratchet teeth, operating against a set of pawls. With the engine running at a set speed, the load can be shifted and dumped at any point with the same ease that characterizes steam-engine efficiency. Safety with an inexperienced operator is guaranteed, as two or more of the pawls are in place to catch any release of the hoisting drum from the engine power. The boom can be swung to any angle without the use of jacks, outriggers or other stabilizing devices.

The flexibility and utilitarian features of the crane were recently demonstrated when one was run up a 25 per cent grade to the top of a coal pile, where it unloaded cars and ran back downward and forward, gradually working up to a higher level as the coal pile expanded.

If desired, the crane can be fitted with railroad wheels. Clamshell dredge bucket, drag-line bucket, pile-driver unit, or electric shift magnet are all features that can be combined with the machine if wanted. Changes in boom, cab construction other than that regularly specified, can also be effected.

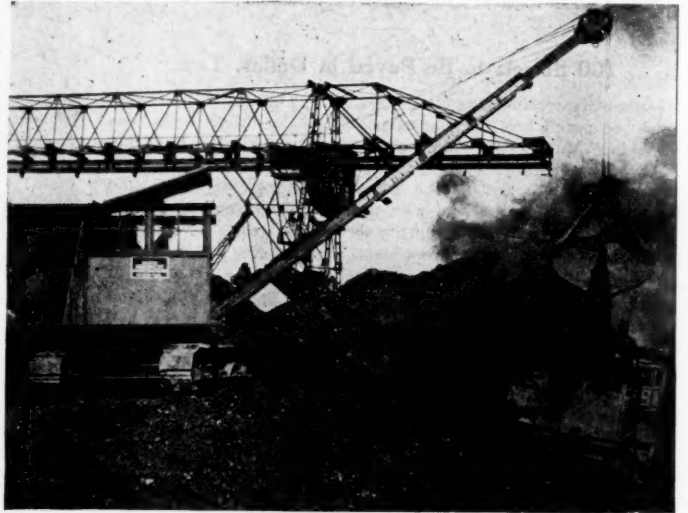
These cranes are built by the Northwest Engineering Works of Green Bay, Wis., whose new plant units, combined with the old ones, have been completed and are in operation, making available 150,000 square feet of floor space. The plant is equipped with the latest and best machine tools, and, it is stated, a \$1,000,000 investment. It has superior rail and water transportation facilities. The general sales office is at 28 East Jackson Boulevard, Chicago, Ill., with R. C. Forbes in charge.

During the war the company obtained and executed a large contract to build vessels for the Government, and last spring delivered the last vessel. Execution of this contract delayed work on the production of cranes, the company having been organized in 1918, purchasing the plant of the Hartmann-Greiling Company to engage in special construction work, and labor conditions then led to investigations that resulted in plans for crane manufacture, but the war contract set them aside for the time being.

Emergency Value of Motor Trucks.

During the memorable "outlaw strike" some months ago, not a few of the country's very large shippers turned to the motor truck as a solution of their freight problems. Among them perhaps none were in a better position to meet the emergency than the Linde Air Products and Prest-O-Lite companies, owing to the fact that these companies carried their own freight both going and coming, delivering full cylinders of oxygen and acetylene to industrial zones where they were vitally needed, and picking up empty cylinders that were badly needed at the charging plants for refilling.

The accompanying photograph shows that the trucking alternative is not always a bed of roses. The trucks shown in the pictures are loaded with Linde oxygen, and much of their way they had to fight a passage through mud up to the hubs, but they



OPERATING ONE-CUBIC-YARD CLAMSHELL BUCKET.

got through, delivered their cargoes where the oxygen was urgently needed and brought back their burden of empties for refilling. In a report on this work, the company's service department writes:

"The consensus of opinion of our customers is that at no time during the past two years have we been able to offer better service than that given during this trying period. It is our intention to continue this trucking movement as long as the road and



AN UGLY ROAD, BUT THE TRUCKS GOT THROUGH.

weather conditions permit, and we have placed orders for additional trucks. Since starting trucking we have released thousands of cylinders for other service."

Both of these companies are now operating several fleets of motor trucks in various districts. Other large companies that have not the advantage of picking up return loads of their own are, in some instances, carrying return freight for other shippers, thus making their trips pay both ways.

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

Fla., Jacksonville.—City Comsn.; build Lee St. viaduct; bids until Jan. 7; Harrington, Howard & Ash, Architects.

Fla., Miami.—City; build bridge over Miami River at Avenue G; double-leaf steel bascule span, with piers and embankment approaches; clear span 115 ft.; total length of improvement 495 ft.; 30-ft. roadway; bids until Jan. 6; changed date from Jan. 8; Chas. W. Murray, City Engr., Miami; Harrington, Howard & Ash, Conslt. Engrs., Jacksonville, Fla. (See Machinery Wanted—Bridge Construction.)

Fla., Osteen Ferry.—New Smyrna Board of Trade, New Smyrna, Fla.; interested in building free bridge across St. Johns River.

Fla., Titusville.—Brevard County Comms., J. F. Mitchell, Clk.; build 8600-ft. trestle bridge; 90,000 cu. yds. dredge fill; pave 28 mi. roads; bids until Dec. 6; changed date from Dec. 9; C. M. Rogers, Engr., Daytona, Fla. (See Machinery Wanted—Bridge Construction.)

Ga., Alamo.—Wheeler County Comms.; build 4 bridges and 12 culverts; \$50,000; construct 10 mi. sand-clay graded road; Estes-Williams-Ragsdale Co., Contr., Memphis, Tenn.; Garrett & Slack, Engr., Montgomery, Ala. (Lately noted inviting bids.)

Ky., Jackson.—Breathitt County Comms.; construct 2 bridges; will let contract.

Ky., Louisville.—Board of Public Works; build reinforced concrete bridge over Bluegrass Creek; 49-ft. span; \$6212; John Chambers, City Engr.; J. U. Schickl & Bros., Contractors.

Okl., Sallisaw.—Sequoyah County Comms.; build Bebbers Falls bridge over Arkansas River; vote in January on \$100,000 bonds.

Miss., Natchez.—City, Frank V. Elsele, Clk.; rebuild bridge over Wickland Bayou; bids until Dec. 6. (See Machinery Wanted—Bridge Construction.)

Mo., Kansas City.—City; James Cowgill, Mayor; build 7th St. viaduct; \$450,000; will invite bids.

S. C., Columbia.—Richland County Supvrs., S. H. Owens, Supvr.; improve Congaree bridge over Congaree river.

Tex., Breckenridge.—Stephens County Commissioners, W. C. Veale, County Judge; build concrete viaduct over Gonzales Creek; length 220 ft.; width 44 ft.; bids until Dec. 3; Nagle, Witt & Rollins Engineering Co., County Engr.

Tex., Breckenridge.—Stephens County, E. E. Conlee, Auditor; build concrete bridge on Crystal Falls Rd., 2 concrete culverts, concrete bridge on Eastland Rd. and concrete culvert and concrete dip, etc.; bids until Dec. 3; Nagle, Witt-Rollins & Quarles, Engrs. (See Machinery Wanted—Bridge Construction.)

Tex., El Paso.—El Paso County Comms., J. A. Escajeda, Auditor; build bridge across Rio Grande River; 6 mi. roadway; bids until Dec. 13. (See Machinery Wanted—Bridge Construction.)

Tex., Nacogdoches.—Nacogdoches County Comms., I. D. Parmley, Clerk; build steel bridges; 167,141 lbs. reinforcing steel; 983,667 lbs. structural steel; 68,000 ft. F. B. M. flooring; bids until Dec. 13; Lamar Acker, Engr. (See Machinery Wanted—Bridge Construction.)

Tex., Orange.—Orange County, D. C. Bland, Judge; build 700-ft. steel and concrete bridge across Adams Bayou; 5 mi. Orange-Beaumont roads; Houston Construction Co., Contr., Houston, Tex. (Lately noted inviting bids.)

Va., Cloverdale.—Roanoke & Botetourt Railroad Co., A. P. Staples, Prest., Terry Bldg., Roanoke, Va.; build 4 small span bridges.

Va., Hampton.—Elizabeth City County Supvrs., H. H. Holt, Clk.; replace 6 board bridges with reinforced concrete bridges on various roads; bids opened Nov. 30. (See Machinery Wanted—Bridge Construction.)

Va., Houston.—Virginia State Highway Comsn., G. P. Coleman, Commr., Richmond, Va.; build 540-ft. bridge and fill approaches over Bannister River; \$30,486.20; low bidder, Roanoke Iron & Bridge Works, Roanoke, for superstructure, and L. E. Easley, Houston, for substructure and approaches. (Lately noted inviting bids.)

Va., New Canton.—State Highway Dept., Richmond, Va.; build bridge at Brems Bluff.

Canning and Packing Plants.

N. C., Kinston.—Chamber of Commerce; interested in establishing canning factory.

Tex., Dallas.—George A. Hormel & Co., Paul Roman, Mgr.; erect meat-packing storage building; \$100,000; Inge Construction Co., Contr.

Tex., Nixon.—W. L. Hoover, Secy.-Treas. Nixon Electric Light & Power Co.; interested in constructing chain of canning factories.

Clayworking Plants.

Tenn., Newcomb.—Brick and Tile.—Jellico Brick Co. Inceptd.; capital \$100,000; Peter Zechlin, Frank D. Smith, G. A. Atchley; all Knoxville, Tenn.

W. Va., Nitro.—Nitro Brick & Tile Co. incorporated; capital \$25,000; A. M. D. Hersberger, Clendenin, W. Va.; T. G. and J. T. Saunders, St. Albans, W. Va.

Coal Mines and Coke Ovens.

Ky., Ashland.—Caney Fork Collieries (lately noted inceptd., capital \$500,000) organized; 217 Second National Bank Bldg.; W. F. Ellis,

Prest.-Constr. Engr.; Geo. C. Boechardt, V.-P.; O. W. Miller, Secy.-Treas.; develop 1000 acres; daily output 15 cars; install mchy. (See Machinery Wanted—Mining Machinery.)

Ky., Clay.—Smith-Cook Coal Co. Inceptd.; capital \$15,000; Davis and W. I. Cook, A. A. Smith.

Ky., Collins.—Four Seams Collieries Co.; construct tippie and miners' houses.

Ky., Dorton.—Kentucky By-Products Coal Co.; leased additional 300 acres coal land; increase daily capacity to 1000 tons.

Ky., Elwood.—Kentucky Block Fuel Co.; develop additional mines; erect miners' houses.

Ky., Harlan.—Minelga-Harlan Coal Co.; construct coal tippie, miners' houses and school. (Lately noted inceptd., capital \$45,000.)

Ky., Madisonville.—Hard Coal Corp., Brent Hart, Prest.; purchased established mines, Monarch No. 11 and Victoria No. 9 of Victoria Coal Co.; develop.

Ky., Pike County.—Ira Coal Co. Inceptd.; capital \$40,000; W. P. Varney, Ira Webb, P. A. West; all Williamson, W. Va.

Ky., Pikeville.—Mossy Bottom Coal Co.; erect coal tippie, store and miners' houses. (Lately noted increased capital to \$50,000.)

Ky., Shelby Gap, P. O. Dorton.—Adamson Coal Co.; construct coal tippie and coal bin.

Ky., Stacy.—Yellow Creek Coal Co.; erect coal tippie and miners' houses.

Ky., Virgie.—J. B. Elkhorn Coal Co.; develop additional mines; construct powerhouse; erect miners' houses.

Ky., Whitesburg.—E. F. White, Geo. Crisfills; purchased plant; improve and extend.

Md., Baltimore.—Archibald McNeil & Sons Co. Inceptd.; 723 Munsey Bldg.; J. Walter Lord, George W. P. Whip, Austin H. Geiselman, Jr.

Md., Cumberland.—Gilbert S. Brush, New York; purchased 5000-acre timber, coal and mineral tract; develop.

Va., Appalachia.—M. D. Collier, R. W. Holley, H. H. Head; purchased Mohawk Coal Mining Co.; improve plant; increase output; E. F. Tate in charge.

Va., Roanoke.—Oriskany Mining Corp. chartered; Terry Bldg.; capital \$150,000; A. P. Staples, Prest.; Paul C. Buford, Secy.

W. Va., Adrian.—Tennille Fuel Co., Clarksburg, W. Va.; develop coal land; tippie operations; contemplates erecting 800-ft. span cable or bridge.

W. Va., Bluefield.—Elkhorn Gas Coal Co. Inceptd.; capital \$100,000; R. A. and H. W. Crockett; both Bluefield; J. S. Gillespie, Graham, Va.

W. Va., Charleston.—Guyan Coal Co. incorporated; capital \$25,000 Lester Hundley, C. C. Morris; both Charleston; George Darling, Cleveland, O.

W. Va., Charleston.—Standard Gas Coal Co. Inceptd.; Kanawha Valley Bank Bldg.; capital \$150,000; W. S. Wood, Quinn Morton, E. G. Clark.

W. Va., Charleston.—Tidewater & Domestic Coal Co. Inceptd.; capital \$25,000; Len G. and H. H. Marks; both Charleston; S. T. Halstead, St. Albans, W. Va.

W. Va., Charleston.—Wood-Morton Fuel Co. Inceptd.; Kanawha Valley Bank Bldg.; capital

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

\$100,000; George S. Coude, Steven Tully, E. G. Clark.

W. Va., Clarksburg.—Lewis County Collieries Co. Inceptd.; capital \$25,000; Guy A. Hardesty, Karl B. Kyle, Glemm F. Williams.

W. Va., Lost Creek.—Champion Collieries Co., Cleveland, O.; purchased 500 acres coal land; develop. (Previously noted organized, capital \$1,000,000.)

W. Va., Monon.—Brady Corp. organized; S. D. Brady, Prest.; A. P. Brady, V.-P. and Asst. Treas.; James Close, Secy.; all Fairmont, W. Va.; develop 928 acres; absorb Monongalia, Osage, Darby, Brazell and Abrams Creek Coal & Coke Co.'s; total 9420 acres. (Lately noted chartered, capital \$2,000,000.)

W. Va., Moundsville.—W. C. Tehanari, New York; has option on coal land; develop; reported.

W. Va., Sand Run.—Crown Run Coal Co. Inceptd.; capital \$100,000; Archibald J. Chisholm, George E. Burgess; both Blaine; George W. Legge, Jr., Cumberland, Md.

W. Va., Sutton.—Robinson Coal & Coke Co. Inceptd.; capital \$50,000; Jasper Cope, Lloyd H. Hambert; both Uniontown, Pa.; William J. Robinson, Palmer, W. Va.

W. Va., Williamson.—Borderland Coal Co., James P. Woods, Prest., Roanoke, Va.; increased capital from \$800,000 to \$1,500,000.

Concrete and Cement Plants.

Tex., Agatite.—Cement.—American Cement Plaster Co., C. E. Williams, Operating Mgr., Conway Bldg., Chicago, Ill.; erect additional plaster and board mill. Advises Manufacturers Record: Too early for information; conduct investigation of property as to raw material supply; construction deferred.

Cotton Compresses and Gins.

Ark., Lepanto.—Portis Mercantile Co.; rebuild burned cotton gin and compress; loss \$20,000.

Ark., Lepanto.—Portis Mercantile Co.; rebuild burned compress and gin; loss \$40,000.

Ark., Magnolia.—Columbia Compress Co.; rebuild burned plant; loss \$275,000.

S. C., Anderson.—W. T. McClure; rebuild burned ginnery; loss \$25,000.

Tex., Corsicana.—Corsicana Compress Co. Inceptd.; capital \$100,000; J. A. Thompson, J. S. Eubank, Bush Wofford.

Tex., Gatesville.—D. B. Pennington; rebuild burned cotton gin; loss \$10,000.

Tex., McKinney.—McKinney Compress Co.; increased capital from \$200,000 to \$300,000.

Tex., Marlin.—Exporters & Traders' Compress Co.; rebuild burned compress and warehouse.

Drainage Systems.

Fla., Green Cove Springs.—Clay County, Walkill Drainage Dist.; construct drainage system; issued \$100,000 bonds.

Fla., St. Augustine.—St. Johns County Comms., H. E. Mahr, Chrmn. pro tem. Elkton Drainage Dist. No. 1; widen and deepen drainage canal; bids until Dec. 14. (See Machinery Wanted—Drainage System.)

La., Welsh.—Welsh Drainage Dist. No. 1; construct drainage system; issued \$393,000 bonds.

N. C., Swanquarter.—Hyde County Comms., Drainage Dist. No. 2, L. A. Leigh, Chrmn.; construct drainage system; issued \$393,000.

Tex., Houston.—Harris County Comms.; construct drainage system; sold \$60,000 bonds.

Va., Portsmouth.—Norfolk County Commissioners, Drainage District No. 1, John G. Wallace, Jr., Chrmn.; construct drainage sys-

tem; drain 10,000 acres; Virginia-Carolina Construction Corp., Contr. (Bids lately noted.)

Electric Plants.

Ala., Tuscaloosa.—Alabama Home for Feeble-Minded; erect power-house, laundry, dormitory, etc.; \$2,000,000; D. O. Whildin, Archt., Title Guaranty Bldg., Birmingham, Ala.

Ky., Taylorsville.—City; erect electric-light plant; has plans. Address The Mayor.

Ky., Bloomfield.—Bloomfield Utilities Co., Harry Peet, Jr., Propr.; purchased established plant; \$40,000; concrete block buildings, \$3000; install oil-engine drive, 150 to 200 H. P.; 14 mi. transmission, \$10,000; change direct-current system to alternating current; connecting Bloomfield, Wakefield and Fairfield; prospect line to Taylorsville. (See Machinery Wanted—Engines; Alternators; Transformers.)

Ky., Virgie.—J. B. Elkhorn Coal Co.; construct power-house, miners' houses, etc.

Md., Baltimore.—General Chemical Co., Munsey Bldg.; erect 50x59-ft. power-house, Race and Winder Sts.; has plans.

Md., Baltimore.—Northern Maryland Electric Co. (subsidiary of Consolidated Gas, Electric Light & Power Co.), Lexington Bldg., applied to Public Service Comsn. for authority to issue \$86,000 in securities for extensions and improvements to plant in vicinity of Clark's Ferry; include transmission line from Sylmar to Rising Sun and connection of its Sylmar lines to existing utility systems in Oxford section.

Miss., Pascagoula.—City; construct electric-light plant; erect 58x44x23-ft. building; brick construction; install 90 K. W. generator, two 150 H. P. boilers with 100-ft. steel stack, 2-panel switchboard, electrical and steam connections; McCrary & Co., Contr., Atlanta, Ga. (Lately noted voted \$25,000 bonds.)

Miss., Sanatorium.—Mississippi State Board of Health, Dr. Harvey McNeil, Prest., Jackson, Miss.; Dr. Henry Boswell, Supt., Sanatorium; erect \$65,000 power-house; Bem Price, Archt., 1420 Jefferson County Bank, Birmingham, Ala.

Mo., Blairstown.—City; install electric-light plant; vote on bonds. Address The Mayor.

Mo., Fulton.—City; erect power plant. Address The Mayor.

Mo., Crane.—Lawrence County Water, Light & Cold Storage Co., Aurora, Mo.; contemplates installing electric-light system.

Mo., Jefferson City.—Kansas City Power & Light Co.; increased capital from \$20,000,000 to \$45,000,000.

Mo., Wellington.—City, L. A. Walton, Clk.; erect electric-light plant; has plans.

Tex., Hallettsville.—City; install steam engine in electric-light plant; vote Dec. 12 on \$20,000 bonds. Address The Mayor.

W. Va., Buckhannon.—Buckhannon Light & Water Co. reorganized; Enoch Bellis, Prest., contemplates building 350 K. W. power line. (See Water-works.)

W. Va., Kingwood.—Carleton Mining & Power Co.; erect power-house; contemplated.

Fertilizer Factories.

Ala., Gadsden.—Grasselli Chemical Co.; install additional mixing machine; \$10,000; increase plant's capacity.

Flour, Feed and Meal Mills.

Ga., Sycamore.—David Cravey; rebuild burned gist and feed mill.

Ga., Waynesboro.—Chamber of Commerce, W. W. Clark, Secy.; organize \$100,000 com-

pany; establish grain elevator, potato storage-house and stockyards.

Okla., Claremore.—Hurst Grain Co. Inceptd.; capital \$25,000; H. O. and L. B. Hurst, W. L. Shelton.

Tex., Beaumont.—Beaumont Rice Mills, Joe E. Broussard, Prest.; increased capital from \$300,000 to \$400,000.

Tex., Sour Lake.—Sour Lake Grain Co. Inceptd.; capital \$7000; J. E. Josey, R. C. Miller, B. Goodman.

Va., Norfolk.—Port Comsn.; contemplates constructing \$1,000,000 grain elevator; will invite competitive bids for plans.

Foundry and Machine Plants.

Fla., Clearwater.—Machinery.—Skinner Machinery Co.; increased capital to \$600,000.

Ky., Louisville.—Furnace, etc.—American Furnace & Roofing Co. Inceptd.; Edward W. Rosler, Thomas V. Brooks.

Ky., Louisville.—Portable Electric Tools.—Louisville Electric Mfg. Co., Charles E. Wiley, Prest., 660 S. 2d St.; erect 150x60-ft. plant; concrete floor, composition roofing; D. X. Murphy & Bro., Archt.; A. Markham & Co., Contr. (Lately noted as Eclipse Electric Machinery Co.)

Tex., Beaumont.—Well-drilling Machinery. Beaumont Iron Works Co., L. J. Black, Prest.-Mgr.; construct 1-story 70x70-ft. foundry; 3-story 24x24-ft. office building; \$50,000; Tom Phillipson, Contr., Houston, Tex. (Previously noted to erect plant additions.)

Tex., Dallas.—Machinery.—Dallas Machine & Tool Co. Inceptd.; capital \$500,000; C. T. Conee, S. L. Mackey, R. E. McCloskey; all Wilmington, Del.

Tex., Orange.—Fabricated Steel.—Southern Dry Dock & Shipbuilding Co.; increased capital from \$100,000 to \$200,000; erect plant for car building, fabricated steel construction and general woodworking.

Tex., Waco.—Radiators.—Southern Radiator Factory Inceptd.; capital \$20,000; John McGlasson, F. L. Lightfoot, Will Love.

W. Va., Warwood.—Castings.—Wheeling Steel Castings Co., Wheeling, W. Va.; rebuild burned pattern shop; loss \$30,000 to \$40,000.

Gas and Oil Enterprises.

La., Lafayette.—Delart Refining Co., Arthur R. Evans, Prest.; increased capital from \$50,000 to \$150,000.

Md., Baltimore.—Lalor Fuel Oil System Co. of Maryland Inceptd.; 523 Colvin St.; capital \$100,000; C. Bradley Hays, William B. and James D. Lalor.

Okla., Ardmore.—Wolverine Oil Co.; construct casinghead gasoline plant; 6,000,000-ft. cap absorption; install four 165 H. P. gas engines; four 16x16 compressors; 80 H. P. engine; 6x6 compressor; purchased; \$300,000.

Okla., Atoka.—Sunrise Petroleum Co. Inceptd.; capital \$350,000; T. H. Briggs, E. T. Johnson, H. L. Hames.

Okla., Tulsa.—Tulhoma Oil Co.; increased capital from \$30,000 to \$2,030,000.

Okla., Tulsa.—Oklahoma-Kansas Petroleum & Refining Co Inceptd.; capital \$100,000; W. D. Anderson, Wichita, Kan.; R. H. Dale, C. J. Calvert, Alva, Okla.

Okla., Tulsa.—C. F. Martin Oil Service Inceptd.; capital \$150,000; C. F. Martin, W. D. Callahan; both Tulsa.—L. O. Carter, Chicago, Ill.

Okla., Tulsa.—Marathon Petroleum Co. Inceptd.; capital \$200,000; Oscar Lowry, H. W. Johnson, B. H. Boehmler.

Tex., Dallas.—Nova Scotia-Texas Petroleum Co. Inceptd.; capital \$200,000; W. E. Welborne, W. G. Miller, B. L. Hardy.

Tex., Dallas.—Halmack Oil Co. inctd.; S. B. Perkins, F. J. Tholl, P. A. Bywaters.

Tex., Houston.—Texas Co.; increased capital from \$130,000,000 to \$143,000,000.

Tex., Liberty.—Whaley Cove Oil Co. inctd.; capital \$100,000; J. J. Baggett, A. H. and N. Waldman.

Hydro-Electric Plants.

N. C., Mortimer.—United Mills Co., H. J. Holbrook, Secy., Hickory, N. C.; erect power-house, dams, transmission lines, etc., for operation of cotton mill and public service.

N. C., Lenoir.—Granite Falls Mfg. Co.; construct power-house, dam and transmission line.

S. C., Lockhart. — Lockhart Power Co., Emslie Nicholson, Prest.; build hydro-electric plant on Broad River; 15,000 H. P.; transmission lines 20 mi.; power-house 168x30 ft.; reinforced concrete; Hardaway Contracting Co., Contr.; W. D. Dent, Resident Engr.; both Lockhart; I. W. Jones, Const. Engr., Milton, N. H. (Supersedes previous item.)

Ice and Cold-Storage Plants.

Fla., Jacksonville.—South Jacksonville Utilities Co., E. L. Gunn, Prest.; erect plant addition; install mchy.; purchased; treble capacity.

Ga., Savannah. — Georgia Ice Co., A. M. Dixon, Mgr., Box 1352; erect 60x150-ft. plant addition; concrete, brick and steel construction; \$35,000; double capacity; increase storage capacity by 200 tons; Artley Contracting Co., Contr.; drill artesian well; Savannah Artesian Well Contracting Co., Contr. (Lately noted to erect plant.)

Mo., Centerville.—Harbison Dairies; erect cooling plant; daily capacity 50,000 lbs.

Miss., Meridian.—City; E. J. Gallagher, Chrm. of Comm.; establish municipal ice and cold-storage plant; voted \$150,000 bonds. (Lately noted to vote.)

S. C., Olympia.—Crystal Ice Plant, Fred Kortright, Prop.; rebuild burned ice plant; loss \$40,000.

Tex., Memphis.—Memphis Light & Ice Co. organized; Fred G. Miller, Propr.; erect 56x120-ft. building; ordinary mill construction; \$10,000; install steam, prime movers, electric-driven ice machine, \$75,000; daily capacity 20 tons ice. Previously noted. (See Machinery Wanted—Boilers; Motors; Ice Machinery.)

Tex., San Antonio.—Southern Ice & Cold Storage Co., Mark F. Postlewaite, Mgr.; erect 54x121x55-ft. plant addition; reinforced concrete building; Barrett roofing; \$100,000; install elevators; purchased; Willard Simpson, Archt.; Walsh & Burney, Contr.

Iron and Steel Plants.

Mo., West Plains.—Iron Furnace.—Missouri Iron & Steel Corp., Hicks Clark, Secy., 1411 International Life Bldg., St. Louis, Mo.; will blow in blast furnace at Haigart plant; build charcoal retorts and construct tramroad; considering building 2 additional furnaces and tripling capacity of furnace after it is blown in.

W. Va., Weirton.—Steel Furnaces.—Weirton Steel Co.; begun operation of 3 of 7 new open-hearth furnaces; additional furnaces soon to be placed in operation. (Company reported in June as to build additions, including initial steel plant of seven 100-ton open-hearth furnaces for daily capacity of 1500 tons.)

Land Developments.

Ala., Decatur.—City; purchased 32 acres; develop for park, construct swimming pool and street. Address The Mayor.

Fla., Clermont.—Clermont Fruit Land Co. inctd.; capital \$10,000; C. E. Baxter, Prest.; F. C. Grable, Secy.; H. A. Nebel, Treas.

Fla., Orlando. — Seminole Nurseries Co. inctd.; capital \$20,000; L. L. Long, R. B. Ray; both Orlando; S. S. Ray, Denmark, S. C.

Fla., West Palm Beach.—Atlantic Heights Realty Co. inctd.; capital \$10,000; J. M. Clifton, H. F. Noble, F. J. Anderson.

Ga., Ingleside. — Georgia Duck & Cordage Mills; develop mill and village grounds; Otto Karzenstein, Landscape Archt., Healey Bldg., Atlanta, Ga.

Tex., Cisco.—City; develop parks and purchase school property; voted \$60,000 bonds. Address The Mayor.

Tex., Waco.—City; develop Wm. Cameron Park; 400 acres; construct roads and swimming pool; install water system, etc.; voted \$65,000 bonds. Address The Mayor. (Lately noted to vote.)

Va., Bristol.—Country Club Land Co., J. T. Cecil, Prest.; purchased 80 acres land; develop for golf links and tennis courts.

Lumber Manufacturing.

Ark., Dermott.—Fee-Clayton Hardwood Lumber Co.; rebuild burned plant; \$150,000.

Ark., Earl.—G. T. Whitman Lumber Co. inctd.; capital \$600,000.

N. C., Reidsville.—St. Mary Wheel & Spoke Co., St. Mary, O.; purchased interest of R. L. Watt and R. P. Richardson in John B. Rogers Lumber Co.; install mchy.; enlarge capacity.

Okla., Mangum.—J. C. Long; erect additional sheds; contemplated.

S. C., Bishopville.—Dixie Lumber & Mfg. Co.; rebuild burned planing mill.

Tex., Beaumont.—Southern Land & Lumber Co. inctd.; capital \$100,000; J. L. Lynons, P. E. Hammous, R. S. Barber.

Tex., Butlersburg.—City of Conroe, Tex.; establish \$500 saw mill. Address The Mayor.

Tex., Houston. — Texas Tie & Timber Co. inctd.; capital \$100,000.

Tex., Quinlan. — Stewart & Wade Lumber Co.; rebuild burned plant; loss \$15,000.

Metal-Working Plants.

La., Lake Charles.—Metal Drums, etc.—Southland Metal Co.; erect 40x64-ft. building; corrugated-iron construction; install mchy.; purchased; mfr. steel oil drums, galvanized ice cans, oil and chemical tanks. (Lately noted inctd., capital \$50,000.)

Mining.

Ga., Crest.—Graphite.—Taylor Graphite Co. inctd.; capital \$100,000; J. E. Taylor, Prest.; develop graphite mine; install equipment.

N. C., Balfour.—Rock.—Home Ice & Oil Co., Hendersonville, N. C.; purchased plant of Valentine & Co.; develop; operate under name of Valentine & Co., E. J. Rhodes in charge.

Tex., Houston.—Sand and Gravel.—Producers' Sand & Gravel Co. organized; 408 Union National Bank Bldg.; Ray McDonald, Prest.-Mgr.; Joe Cathrine, V.-P.; O. K. Willborg, Secy.-Treas.; develop 174 acres sand and gravel tract; daily output, 10 cars; install mchy.; purchased. (Lately noted inctd., \$100,000.)

Va., Meadow Mills.—Limestone.—Mutual Lime Co. of Virginia organized; 154 Nassau St., New York; Frederick W. White, Prest.; Moses Bigelow, V.-P.; George G. Henry, Secy.-Treas.; develop 400 acres; daily output 250 tons chemical lime. Lately noted. (See Machinery Wanted—Mining Machinery.)

Miscellaneous Construction.

Ala., Decatur.—Swimming Pool.—City; Jas. A. Wilson, Mayor; purchased 32 acres; develop for park, construct pool and street; issue bonds.

Ala., Mobile.—Coal Terminals.—War Dept., Newton C. Baker, Secy., Washington, D. C.; construct coal terminal on Blakely's Island; \$400,000 available; capacity 40,000 tons coal \$400,000 available; capacity 40,000 tons coal and 20,000 tons ore; loading devices of 350 tons per hour; City of Mobile contemplates purchase of site at cost \$37,500. (Supersedes recent item.)

Fla., Tampa.—Canal.—Atlantic Coast Line R. R., J. E. Willoughby, Chief Engr., Wilmington, N. C.; deepen canal at Port Tampa to give 27 ft. depth; canal is $\frac{3}{4}$ mi. long; 200 ft. wide; 87,120 cu. yds. excavation will be required.

Fla., Tampa.—Terminal.—Port Comms., S. M. Sparkman, Prest.; dredge east side Ybor channel; bids until Dec. 9. (Lately noted bids Nov. 1. (See Machinery Wanted—Dredging.)

La., New Orleans.—State Dock Board; rebuild burned wharves for Cuyamel Fruit Co.; loss \$600,000.

N. C., Charlotte.—Heating Plant.—F. C. Berry, City Supt; install water-heating system in city auditorium; contemplated.

S. C., Charleston.—Terminals.—South Carolina Port Terminals inctd.; capital \$100,000; Henry Schachte, H. A. Molony, W. R. Bonnal.

Tex., Corsicana.—Navarro County Comms., Levee Dist. No. 10; construct levee; issued \$230,000 bonds.

Va., Hampden-Sidney — Memorial Gate.—Hampden-Sidney College; erect war hero memorial gate at campus entrance; \$7500.

Va., West Norfolk — Terminals. — Hastings Co., 600 Seaboard Bank Bldg.; construct wharf terminals and storehouses; timber and reinforced concrete; \$150,000 to \$200,000; construction by owner. Lately noted to rebuild burned wharf. (See Machinery Wanted—Conveyors; Cars; Ties, etc.)

Miscellaneous Enterprises.

Ala., Birmingham.—Fire-Alarm System.—City; construct fire-alarm system; 30 mi. underground work; 200 ml. overhead construction; install 40 additional boxes, etc.; \$174,000; Frank W. Nicholson, Alarm Const. Engr., 70 E. 45th St., New York.

Ala., Mobile. — Printing. — Mobile Register; remodel 2-story building; 62x100 ft.; mill construction; composition roof; concrete floors; \$18,000; C. L. Hutchinson, Archt., 32 Emanuel Bldg.

Ala., Tuscaloosa.—Laundry.—Alabama Home for Feeble-Minded; erect laundry, power-house, dormitory, etc.; \$2,000,000; D. O. Whildin, Archt., Title Guaranty Bldg., Birmingham, Ala.

Fla., Jacksonville.—Export.—Atlantic & Gulf Export Co. inctd.; capital \$2,000,000; W. B. Gillican, Prest., New Orleans, La.; H. L. Richmond, Secy.-Treas., Jacksonville, Fla.

Fla., Tampa.—Phosphate Elevator.—Atlantic Coast Line R. R., J. E. Willoughby, Chief Engr., Wilmington, N. C.; erect phosphate elevator on north side canal at Port Tampa; steel construction; loading capacity 400 tons per hr.; install mchy.; purchased.

Ga., Waynesboro.—Potato Storage, etc.—Chamber of Commerce; interested in establishing potato-storage house, stockyards and grain elevator.

Ky., Louisville.—Printing.—Dickson Co., Joe S. Dickson, Prest.; increased capital from \$20,000 to \$22,000.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

La., Monroe—Laundry.—Monroe Steam Laundry, G. B. Cooley, Propr.; S. Grand St.; erect plant addition; brick construction; 8000 ft. floor space; \$15,000; Frank Basling, Contr.

Md., Baltimore—Construction.—Crescent Electric Construction Co. inctpd.; 248 W. Preston St.; George Winters, Jr., George A. Schafer, John Thomas Mooney.

Md., Baltimore—Printing.—H. E. Houck & Co., Calvert and Franklin Sts.; purchased building; later remodel for printing plant.

Md., Baltimore—Laboratory Supplies.—Lexington Laboratory Supply Co. inctpd.; 210 E. Lexington St.; capital \$22,000; Edward F. Peroutka, Kerner F. and Courtney F. Brown.

Md., Salisbury—Transportation.—Shore Transit Line inctpd.; capital \$75,000; Alexander M. and Benjamin J. Jackson, Mark Cooper.

Mo., St. Louis—Dairy.—Clover Farm Dairy; increased capital from \$100,000 to \$400,000; erect plant; has plans.

N. C., Charlotte—Laundry.—Union Laundry Co., E. R. Faires; erect 50x129-ft. laundry building; \$5000 to \$10,000; install equipment.

N. C., Wilson—Building Material.—Building Material Co. inctpd.; capital \$250,000; W. R. Wyatt, Wilson; A. B. Consovo, A. D. Pervermyer; both Norfolk, Va.

Okla., Muskogee—Cleaners and Dyers.—Spotless Cleaners & Dyers inctpd.; capital \$20,000; R. T. Price, M. G. Young, B. C. Sargent.

Okla., Oklahoma City—Construction.—Green Construction Co. inctpd.; capital \$50,000; Harry F. Green, W. S. Moothart, F. W. Brooks.

Okla., Tulsa—Amusement.—Mid-Continent Amusement Co. inctpd.; capital \$50,000; R. J. Allison, O. P. Smith, J. L. Shaugnessy.

Okla., Walters—Publishing.—Walters Publishing Co. inctpd.; capital \$30,000; Henry E. Castleberry, Mortimer Woodson, W. B. Anthony.

S. C., Columbia—Office Supplies.—Columbia Office Supply Co., Jas. G. Holmes, Prest.; increased capital from \$25,000 to \$50,000.

S. C., Gaffney—Laundry.—E. N. McGuinn (lately noted to establish laundry) has plant; install machinery; later to erect 30x30-ft. building. (See Machinery Wanted—Boiler; Motors; Dryroom Equipment.)

Tenn., Nashville—Laundry.—Capital City Laundry inctpd.; capital \$20,000; W. C. Watts, Jr., J. F. Crowell, A. T. Levine.

Tex., Austin—Construction.—Home Construction Corp. chartered; capital \$50,000; Bernard Goodman, J. E. Blaine, John D. McCall.

Tex., Eastland—Printing.—Chronicle Printing Co. inctpd.; capital \$15,000; F. A. Jones, J. C. Allison, L. A. Petite.

Va., Richmond—Publishing.—Richmond Publishers' Corp. chartered; C. P. Hasbrook, Prest.; J. S. Bryan, V. P.; Allen Potts, Secy.; T. S. Winston, Treas.

Tex., Temple—Laundry.—National Steam Laundry; expend \$20,000; build addition; install machinery.

Tex., Wichita Falls—Distilled Water.—Adams Electrified & Distilled Water Co.; increase capital from \$20,000 to \$50,000.

Va., Fredericksburg—Summer Resort.—Potomac Beach Summer Resort inctpd.; capital \$25,000; Timothy S. Tinch, Prest.; M. A. Ahern, Secy.; both Washington, D. C.

W. Va., Keyser—Publishing.—Doyle Publishing Co. inctpd.; capital \$5000; C. W. Seiver, H. L. Arnold, H. C. Hodges.

Miscellaneous Factories.

Ark., Springdale—Grape Juice.—Welch Grape Juice Co., Westfield, N. J.; expend sev-

eral hundred thousand dollars on branch plant.

D. C., Washington—Liniment.—Mike Martin Liniment Co. inctpd.; capital \$250,000; M. F. Martin, W. H. Fowler, Clark C. Griffith.

Fla., Freeport—Paper Mill.—Harold D. Winter, Engr., Chicago, Ill.; erect paper mill; reported.

Fla., New Smyrna—Bottling.—Lowe Bottling Works, Daytona, Fla.; establish branch plant; purchased site.

Ga., Atlanta—Antiseptic.—Zonite Co. organized; capital \$200,000; G. F. Willis, Prest.

Ky., Henderson—Distillery.—Peerless Distillery Corp. chartered; capital \$200,000; Walter C. Taylor, James B. O'Donnell; both Cincinnati, O.; John D. Mills, Norwood, O.

Ky., Lexington—Tobacco.—Burley Tobacco Growers' Assn. inctpd.; John C. Van Meter, Lexington; E. M. Mansfield, Carrollton, Ky.; Trumbo Snedger, Owingsville, Ky.

Ky., Louisville—Clothing.—Kennedy Co. incorporated; capital \$10,000; John H. Sheridan, Leslie H. Putman, W. S. Herdenberg.

Ky., Louisville—Rendering.—New Louisville Rendering Co., Chas. A. Knight, Prest.; contemplates additional building in spring. (Lately noted to rebuild burned plant.)

La., La Del—Carbon.—Monroe Louisiana Carbon Co., Edmond C. Beckman, Prest., St. Louis, Mo.; erect half-million-dollar plant; mfrs. carbon.

La., New Orleans—Bagasse.—B. G. Dahlberg, representing undisclosed interests; establish \$500,000 plant; purchased site; mfrs. building board from bagasse; lay tracks from prospective buildings to Southern Pacific & Texas-Pacific R. R.

Md., Baltimore—Hide and Fur.—Lewis Baer Hide & Fur Co. inctpd.; Equitable Bldg.; capital \$100,000; George E. Jeffrey, Alfred Kann, Henry W. Schultheis.

Md., Baltimore—Brooms.—Maryland School for Blind, Edmondson and Fulton Aves.; erect 94x50-ft. plant addition; brick construction; John E. Marshall & Sons, Contrs., 117 South St.; \$30,000; mfrs. brooms.

Md., Baltimore—Trunks, etc.—Chain Stores Corp. of America chartered, 116 E. Baltimore St.; capital \$2,000,000; Jacob V. Cohn, Sol A. Bogat, Verne L. Tickner.

Md., Frostburg—Clothing.—Khaki-Jeans Mfg. Co. organized; J. B. Williams, Prest.; Conrad Ort, Treas.; W. C. Jones, Secy.-Mgr.; has plant; contemplates building at later date. (Lately noted inctpd., capital \$10,000.)

Miss., Biloxi—Turpentine.—J. H. Johnson; rebuild burned turpentine still; loss \$10,000.

Mo., St. Louis—Coffee.—Biston Coffee Co., 909 N. Broadway; increased capital from \$60,000 to \$250,000. (Supersedes recent item.)

Mo., St. Louis—Leonard Haeger, 384 Utah Pl.; preparing plans for factory and powerhouse; 1 story; 36x100 ft.; reinforced concrete; brick.

N. C., Asheville—Creamery.—Co-operative Creamery inctpd.; capital \$50,000; J. W. Haynes, D. Reeves Noland.

N. C., Charlotte—General Supplies.—Monarch Supply Co. inctpd.; capital \$100,000; M. G. Macks, G. S. Oakley, C. J. Roberts.

N. C., Charlotte—Sizing Compounds.—D. & M. Co. organized, 517 Realty Bldg.; John L. Dabbs, Prest.; H. C. Mayer, Secy.-Treas.; has building; install mchy.; purchased; mfrs. sizing and finishing materials. (Lately noted inctpd., capital \$100,000.)

N. C., Greenville—Storage Batteries.—Greenville Storage Battery Co. inctpd., capital \$50,000; W. G. Downing, W. T. Bryan, J. K. Proctor.

Okla., Cushing—Drugs.—Cushing Drug Co. inctpd.; capital \$20,000; W. N. Davidson, H. C. Manning, J. M. Marable.

Okla., Tulsa—Tannery.—Maurice Doody, Sherman, Tex.; establish tannery; contemplated.

S. C., Charleston—Wood Flour.—Zwixite Co.; rebuild burned grinding and mixing plant.

S. C., Charleston—Bakery.—Pure Food Bakers organized; 3 Chalmers St.; Nick Sifneos, Prest., Treas. and Mgr.; Stellanos Paparrizos, V. P. and Secy. (Lately noted inctpd., capital \$30,000.)

S. C., Columbia—Drugs.—Union Station Drug Co.; increased capital to \$50,000.

S. C., Columbia—Remedies.—Veterinary Remedies Co. inctpd.; J. D. Anderson, S. S. Crittenden.

Tenn., Chattanooga—Clothing.—Fulmer, Reeves & Ware Co. inctpd.; capital \$25,000; J. G. and M. E. Fulmer, LeRoy Reeves.

Tenn., Chattanooga—Clothing.—Boys' Shop of Fulmer, Reeves & Ware Co. inctpd.; capital \$10,000; J. G. Fulmer, Leroy Reeves, H. M. Silverstein.

Tenn., Knoxville—Chero-Cola.—Chero-Cola Bottling Co., George Johnson, Prop. 911 N. Central Ave.; erect fireproof reinforced concrete building; install bottling mchy.; \$75,000; purchased daily output 2000 cases; F. E. Hicks, Engr.-Archit.; J. M. Dunn & Son, Contractors. (Lately noted building to be erected by Chero-Cola Bottling Co. and E. C. Brisco Motor Co.)

Tenn., Memphis—Chemicals.—Oriental Chemical Co. inctpd.; capital \$10,000; W. L. Eichberg, W. W. Laughlin, Julian M. Parker.

Tenn., Memphis—Chemicals.—Oriental Chemical Co. inctpd.; capital \$10,000; W. L. Eichberg, W. S. Laughlin, Julien M. Parker.

Tenn., Nashville—Candy, etc.—George K. Brown Co., Chattanooga, Tenn.; leased building; 4800 ft. floor space; later to erect factory.

Tex., Amarillo—Drugs.—Fly-Barton Drug Co. inctpd.; capital \$10,000; W. G. Fly, T. D. Barton, R. C. Johnson.

Tex., Corsicana—Navarro Mfg. Co. inctpd.; capital \$150,000; Wm. Clarkson, Jr., J. S. Cain, Bush Wofford.

Tex., Dallas—Chemicals.—First Texas Chemical Co.; purchased 40x95-ft. site; erect plant addition; \$40,000 to \$50,000.

Tex., El Paso—Paints, etc.—Yelton-Tuttle Paint & Wall Paper Co. inctpd.; capital \$40,000; V. H. and C. G. Yelton, H. M. Tuttle.

Tex., Houston—Macaroni.—Houston Macaroni Co. inctpd.; capital \$100,000; Frank Bonno, John Bonno, Nic Bonno.

Tex., Houston—Bottling.—Eagle Bottling Works; erect plant; \$24,000; Houston Construction Co., Contr.

Tex., Lockhart—Knee Pads.—Sears Mfg. Co.; rebuild burned factory; loss \$25,000.

Tex., Sherman—Ice Cream.—Jenson-Eckel Ice Cream Co.; remodel 2-story 40x100-ft. building; install equipment; \$35,000; daily output 2500 gal. ice cream. (Lately noted.)

Va., Roanoke—Chero-Cola.—Roanoke Chero-Cola Bottling Co. inctpd.; capital \$100,000; E. F. Bohannon, Prest.; J. A. Bear, Secy.

Va., Suffolk—Peanuts.—Pond Bros.; rebuild burned peanut factory and warehouse; \$150,000 to \$200,000; has plans. (Lately noted to build.)

W. Va., Charleston—Polish, etc.—Porter-Preston Mfg. Co. inctpd.; capital \$50,000; Charles H. Porter, Arthur A. Preston, E. A. Salmond.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Motor Cars, Garages, Tires, Etc.

Ala., Birmingham—Automobiles.—Consolidated Motor Car Co., E. D. Johnston, Prest., 1st Ave. and 23d St.; rebuild burned building; loss \$120,000.

Ala., Mobile—Automobiles.—Adams Motor Co.; erect automobile building; 3-story, 114x168 ft.; reinforced concrete; pressed-brick front; hollow-tile curtain walls; plate glass; concrete and tile floors; composition roof; elevators; C. L. Hutchisson, Archt., 32 Emanuel Bldg.

D. C., Washington—Automobiles.—Petersen Motors Incptd., capital \$50,000; T. L. Croteau, M. A. Bruce, S. E. Dill; all Wilmington, Del.

Fla., Miami—Garage.—Henry Schneider; erect garage; 2-story; frame.

Fla., Miami—Garage.—A. H. Goodwin; erect garage; 2-story; concrete.

Fla., Orlando—Garage.—J. Van Buskirk; erect garage.

Fla., Pensacola—Automobiles.—Son Buick Co., Jac A. Son, Mgr., 19 W. Garden St.; erect automobile building; ladies' restroom; repair and service department.

Ga., Atlanta—Motor Trucks.—Kleiber Motor Truck Co., Ed Kleiber, Park and Peters Sts.; now completing steel and brick structure embracing 22,500 sq. ft. floor space; soon start on similar building, but much larger.

Ky., Bowling Green—Garage.—Robert Crump & Son; rebuild garage; loss \$10,000.

Ky., Covington—Motor Cars.—Morgan Motor Car Co. organized; 25 E. 5th St.; Thos. R. Morgan, Prest.; L. M. Webb, Secy.; has building; brick and metal construction; 1180 sq. ft. floor space.

Ky., Louisville—Garage.—Ford & Taylor Co. incptd.; capital \$10,000; R. L. Taylor, J. D. Ford, John J. Davis.

Md., Baltimore—Garage.—John I. Copley; has contract for \$25,000 garage; 1 story; brick; 120 stalls.

Md., Baltimore—Garage.—Horn Ice Cream Co., 446 Alsiquith St.; erect \$11,000 garage; 1 and 2 stories; brick.

Md., Baltimore—Automobiles.—Automart Incptd.; 913 N. Howard St.; capital \$5000; Stanley T. Handel, Paul R. Dankmeyer, John H. Hessey.

Mo., Maplewood—Automobile Accessories.—J. W. Murray Mfg. Co., James R. Murray, Prest., Detroit, Mich.; purchased plant of St. Louis Paper Can & Tube Co., 4400 Union Blvd.; erect factory; mfrs. automobile fenders, gasoline tanks and other automobile parts.

Mo., St. Louis—Trucks, etc.—Power Truck & Tractor Co., P. G. Graven, 1235 Syndicate Trust Bldg.; erect 6 factory buildings; each 1 story; 250x250 ft.; brick; fireproof; W. S. Frank, Archt. (Supersedes recent item.)

N. C., Raleigh—Repair Shop.—State Highway Dept.; erect repair shop on 10-acre site; wood construction.

N. C., Pollockville—Garage.—Pollockville Garage Co. Incptd.; capital \$40,000; J. H. Bell, J. H. Simmons, B. T. Scott.

Okla., Sapulpa—Garage.—H. U. Bartlett; erect \$5000 garage; brick and concrete; F. E. Shaffer, Contr.

Tenn., Chattanooga—Garage.—Payne, Montague & Chattanooga, care of T. C. Howell; erect garage; 1 story; 50x150 ft.; L. C. Smallwood Construction Co., Contr., 1123 James Bldg.; C. D. Bearden, Archt., 416 First National Bank Bldg. (Supersedes recent item.)

Tenn., Morristown—Filling Station.—People's Service Station, Memphis, Tenn.; erect filling station; 1 story; 20x38 ft.; brick.

Tex., Dallas—Automobiles.—Lambert Mo-

tor Co., Main and Washington Sts.; rebuild burned building; loss \$50,000.

Tex., Houston—Tractors.—John Taida; organized company; capital \$10,000; manufacture tractors.

Tex., Houston—Tires, etc.—Port Houston Tire & Rubber Co. organized; capital \$1,000,000; J. L. Poole, Prest.; H. H. Allyn, V.-P. and Gen. Mgr.; acquired 3-acre site plant of Universal Tire & Rubber Assn.; enlarge building 10 times present size; mfrs. fabric and cord tires, mechanical rubber goods, including all classes rubber-packing and oil-well supplies, etc.

Tex., Houston—Automobiles.—Sherwood Automobile Market Incptd.; capital \$350,000; W. C. Roberts, Prest.; E. P. Maynard, Secy.-Treas.; erect \$80,000 automobile building; 2-story and basement; frontage 100 ft.; foundation strong enough for 10 stories.

Tex., San Antonio—Tires.—Slen Vulcanizing Co. Incptd.; capital \$1500; L. E. Slen, Albert Slen, Louis E. Slen.

W. Va., Charleston—Automobiles.—Arnett Sales Agency organized; Box 119; T. D. Siler, Prest.; Floyd Heatt, V.-P.; Gertrude Arnett, Secy.; Gus Arnett, Treas. Lately noted incptd., capital \$10,000. (See Machinery Wanted—Paint; Roofing; Building Material.)

W. Va., Fairmont—Garage.—L. D. Harvard; erect \$10,000 garage.

W. Va., Louisburg—Automobiles.—J. C. Boggs Motor & Light Co. Incptd.; capital \$50,000; J. C. Boggs, John A. Littlepage, L. J. Richmond.

W. Va., Welch—Automobiles.—Via Motor Co. Incptd.; capital \$50,000; W. A. Via, A. I. Via, Graham Sale, J. Randolph Tucker.

Road and Street Construction.

Ala., Decatur.—City, James A. Wilson, Mayor; purchased land; construct street; develop park; issue bonds. Address The Mayor.

Ala., Guntersville.—State Highway Comsn., Montgomery, Ala.; construct 18.83 mi. Guntersville and Boaz Rd.; steel bridge; bids until Dec. 21; W. S. Keller, State Highway Engr., Montgomery, Ala. Supersedes recent item. (See Machinery Wanted—Road Construction.)

Ala., Montgomery.—City, J. L. Cobbs, Treas.; pave Georgia Ave., Hall, Jackson, Linden and other streets; 18,450 sq. yds. gravel paving; curbing, gutters and storm drainage; contract for paving awarded to P. A. Goldsmith at \$19,741.50; curb, gutter work and storm sewers awarded to Hodgson & Jones at \$11,432.30; H. A. Washington, City Engr. (Lately noted inviting bids.)

Ala., Seale.—State Highway Comsn. of Alabama, Montgomery, Ala.; construct 5½-mi. road; low bidder, L. C. Rawlinson. (Previously noted inviting bids.)

Fla., Bunnell.—State Road Dept., Forest Lake, Chrmn., Tallahassee, Fla.; improve Dixie Highway; grade 8 mi. road; hard-surface with 6-in. coquina rock. (Lately noted.)

Fla., Jacksonville.—Duval County Commrs., Frank Brown, Clk.; spread 3 applications of oil on shell portion of Atlantic Beach Boulevard and part of St. Augustine Road; 65,000 sq. yds.; bids until Dec. 10. (See Machinery Wanted—Road Construction.)

Fla., Ocala.—Marion County Commrs., O. H. Rogers, Chrmn.; construct 400 ft. road from Levy County line; crushed lime rock, 10 ft. wide and 8 in. deep; concrete bridge on Dunnellon-Ingalls road; bids until Dec. 7. (See Machinery Wanted—Road Construction.)

Fla., Titusville.—Brevard County Commrs., J. F. Mitchell Clk.; construct road and bridges in Cocoa Beach Special Road and Bridge Dist.; clear grub, grade and pave 28 mi. roads;

construct 8600-ft. trestle bridge; bids until Dec. 6; changed date from Dec. 9; C. M. Rogers, Engr., Daytona, Fla. (See Machinery Wanted—Road Construction.)

Fla., Tampa.—Comms. Public Works, Allen Thomas, Clk.; pave Ashley St., 70 ft. wide, vitrified brick grouted with asphalt and laid on foundation of crushed rock; 5600 sq. yds. pavement; bids until Dec. 7. (See Machinery Wanted—Paving.)

Fla., West Palm Beach.—City Commrs.; pave streets, construct new sewers, etc.; sold \$250,000 bonds.

La., Arcadia.—Blenville Parish Police Jury, J. S. Williams, Secy.; construct 17½ mi. highways through Jamestown; \$100,000 available; Smith Bros., Contrs., Coushatta, La.; Geo. R. Wilson, Engr., Arcadia, La. (Lately noted inviting bids.)

Ga., Alamo.—Wheeler County Commrs.; construct 10 mi. sand-clay graded road; build 4 bridges and 12 culverts; Estes-Williams-Ragsdale Co., Contr., Memphis, Tenn.

Ga., Chatsworth.—Murray County Commrs.; construct southern end of highway; A. A. Simonton, Div. Engr., State Highway Dept., Rome, Ga.

Ga., Columbus.—City, J. L. Couch, Mayor; pave 19th St. from Hamilton Ave. to 8th Ave., Hamilton Ave., etc.

Ga., Newnan.—Coweta County Commrs. Roads and Revenues, T. G. Farmer, Jr., Clk.; topsoil Newnan and Roscoe road; bids until Dec. 1. (See Machinery Wanted—Road Construction.)

Ga., Savannah.—Chatham County Commrs.; resurface 6½ mi. White Bluff road; \$20,000 invite bids.

La., Arcadia.—Blenville Parish Police Jury, J. S. Williams, Secy.; construct roads; bids until Dec. 20; Geo. R. Wilson Engr. (See Machinery Wanted—Road Construction.)

La., Arcadia.—Highway Dept., Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.; construct 17.37 mi. Arcadia-Shreveport highway and Arcadia-Ruston highway; bids until Dec. 20; Duncan Buie, State Highway Engr., New Orleans. (See Machinery Wanted—Road Construction.)

La., Houma.—Terrebonne Parish Police Jury; hard-surface Houma-New Orleans highway; gravel.

La., Rayville.—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.; construct 10.05 mi. Rayville-Monroe highway, Sections A1 and A2; 13.26 mi. Rayville-Winnboro highway, Section C; bids until Dec. 20; Duncan Buie, State Highway Engr., New Orleans. (See Machinery Wanted—Road Construction.)

La., Shreveport.—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.; construct 3.75 mi. Shreveport-Arkansas highway, Section A; 5.75 mi. Shreveport-Mansfield highway, Section B; bids until Dec. 20; Duncan Buie, State Highway Engr., New Orleans. (See Machinery Wanted—Road Construction.)

La., Tallulah.—Highway Dept., Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.; construct 15.86 mi. Tallulah-St. Joseph highway, Sections A and B; bids until Dec. 20; Duncan Buie, State Highway Engr., New Orleans. (See Machinery Wanted—Road Construction.)

La., Covington.—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans; construct 13 mi. Covington-Sildell highway, Section D; bids until Dec. 20; Duncan Buie, State Highway Engr., New Orleans. (See Machinery Wanted—Road Construction.)

Md., Baltimore.—Board of Awards; grade streets listed in Contract No. 173, including

Chase St. from Loney's Lane to 11th St., Loney's Lane from Chase to Preston St., Preston St. east of Potomac St. to Loney's Lane; 28,000 cu. yds. excavation; 5000 cu. yds. embankment; bids until Dec. 8. (See Machinery Wanted—Paving.)

Miss., Fulton.—Itawamba County Comms.; construct roads; voted \$240,000 bonds.

Miss., Sanatorium.—Mississippi State Board of Health, Dr. Harvey McNeill, Prest., Jackson, Miss.; Dr. Henry Boswell, Supt., Sanatorium; construct concrete walks and driveways; \$30,000; Ben Price, Archt., 1420 Jefferson County Bank, Birmingham, Ala.

Miss., Senatobia.—Tate County Supvrs., M. H. Thompson, Clk.; work public roads of Fourth Supvrs.' Dist.; bids until Dec. 6. (See Machinery Wanted—Road Construction.)

Mo., Independence.—Jackson County Commissioners; repair Fairmont and Independence Aves.

Mo., Boonville.—City; pave 3 mi. streets; brick, concrete and tarvia. Address The Mayor.

Mo., Kansas City.—City; James Cowgill, Mayor; widen 18th St. from Baltimore Ave. to Main St.; \$35,000.

Mo., Kansas City.—City, Park Board; extend Ward Parkway from Meyer Blvd. south to 75th St.

N. C., Bayboro.—Pamlico County Comms.; grade 12 mi. road between Bayboro and Craven County line; Federal-aid Project No. 90; \$118,000; Eagle Engineering Co., Contr., Newbern, N. C.; will let contract for surfacing at later date.

N. C., Boone.—State Highway Comsn., Raleigh, N. C.; construct 8.95 mi. gravel road; Federal-aid Project No. 41; \$94,681.29; contract to County Comms.

N. C., Burgaw.—Pender County Comms., J. E. Henry, Chrmn.; construct 10 mi. sand-clay road from Long Creek to Harrell's store, and 20 mi. sand-clay road from Still Bluff to Kelly's Grove; will invite bids. (See Machinery Wanted—Road Construction.)

N. C., Burnsville.—State Highway Comsn., Raleigh, N. C.; construct 2.95 mi. hard-surfaced road; \$82,653.12; Gibson Construction Co., Contr.

N. C., Greenville.—Pitt County Comms.; construct 9.57 mi. graded road, Federal-aid Project No. 65, between Greenville and Ayden; \$97,545.41; Porter & Peck, Contrs.

N. C., Jackson.—State Highway Comsn., Raleigh, N. C.; construct 2.69 mi. gravel road; Federal-aid Project No. 48B; \$30,154.52; Porter & Peck, Contrs., Greenville, N. C.

N. C., Whiteville.—State Highway Comsn., Raleigh, N. C.; construct 7.06 mi. gravel road; Federal-aid Project No. 75; \$66,905.38; contract to County Comms.

N. C., Wilmington.—City; improve Wrightsville Ave. Address The Mayor.

Okla., Antlers.—State Highway Dept., Oklahoma City, Okla.; construct 4.92 mi. road; gravel; bids opened.

Okla., Eufaula.—McIntosh County Comms.; construct link of Jefferson Highway; \$250,000 available; invite bids

Okla., Idabel.—State Highway Dept., Oklahoma City, Okla.; construct 11.8 mi. road; bids opened.

Okla., Muskogee.—City; repave 3d St.; asphalt pavement. Address The Mayor.

Okla., Newkirk.—State Highway Dept., Oklahoma City, Okla.; pave 2.14 mi. road; brick or concrete; bids opened.

Okla., Stilwell.—State Highway Dept., Oklahoma City, Okla.; construct 6 mi. gravel road; bids opened.

Okla., Wagoner.—State Highway Dept., Oklahoma City, Okla.; construct 17.28 mi. gravel road; bids opened.

Okla., Wilburton.—State Highway Dept., Oklahoma City, Okla.; construct 2 mi. road; burnt shale road on Telford base; bids opened.

S. C., Charleston.—Sanitary and Drainage Comsn.; construct 7 mi. concrete road in St. Andrew's parish.

S. C., Darlington.—State Highway Comsn., Columbia, S. C.; construct road from Florence County line through Darlington towards Cross Hill; \$10,000; L. A. Chitwood, Contr.

S. C., Florence.—State Highway Comsn., Columbia, S. C.; construct 1½ mi. sand-clay road from Florence toward Lake City; \$8000; Thrash & Commander, Contrs. (Lately noted inviting bids.)

S. C., Union.—State Highway Comsn., Columbia, S. C.; construct section road between Cross Keys and Tiger River and section Cross Keys-Spartanburg road; \$9000; Kennedy & Owens, Contrs.

S. C., Walhalla.—Oconee County Highway Comsn., M. McDonald, Secy.; topsoil 8 mi. road between Walhalla and Seneca; \$45,000; Elliott & Sons, Contrs., Union, S. C.; L. M. Welsiger, Div. Engr., Laurens, S. C. (Lately noted inviting bids.)

Tex., Big Spring.—Howard County Comms.; construct 32 mi. gravel road on Highway No. 1; \$292,403; proposed.

Tex., Beaumont.—Jefferson County Comms., W. M. Carroll, Judge; pave 1.9 mi. Highway No. 8; asphalt; \$70,000; proposed; G. R. Abney, County Engr.

Tex., Canadian.—Hemphill County Commissioners; construct sand-clay road to Lipscomb County line; bids until Dec. 13; Hess & Skinner, Engrs., Dallas, Tex. (See Machinery Wanted—Road Construction.)

Tex., Childress.—Childress County Comms., M. J. Hathaway, Judge; construct roads; bids until Dec. 13; Hess & Skinner, Engrs., Dallas, Tex. (See Machinery Wanted—Road Construction.)

Tex., Comanche.—Comanche County Commissioners, J. P. Hoff, Judge; construct 8 mi. road; \$126,297.70; Federal aid; proposed; L. D. Parks, County Engr., De Leon, Tex.

Tex., Dalingerfield.—Morris County Comms., Geo. E. Shive, Judge; construct 10.7 mi. gravel-surfaced road on Highway No. 1-A; McLendon & Purnell, County Engrs.

Tex., El Paso.—El Paso County Comms., J. A. Escaneda, Auditor; grade and gravel 6 mi. roadway; build bridge; bids until Dec. 13. (See Machinery Wanted—Road Construction.)

Tex., Fort Worth.—Tarrant County Comms., H. L. Small, Judge; construct 7.95 mi. Arlington-Grapevine Rd.; \$38,216; T. A. Griffin, Contr., Dallas, Tex. (Supersedes recent item.)

Tex., Fort Worth.—Tarrant County Comms., H. L. Small, Judge; grade and drain 6.824 mi. Kutemans Cut-Off road; \$131,928.40; T. A. Griffin, Contr., 610 N. Texas Bldg., Dallas, Tex.; R. V. Glenn, Engr., Fort Worth, Tex. (Lately noted inviting bids.)

Tex., Fredericksburg.—Gillespie County Comms., A. H. Kneese, County Judge; construct 9.99 mi. Highway No. 9 from Fredericksburg to Kendall County line; \$68,241.14; B. S. Davison, Contr., Houston, Tex.; A. F. Mour-sand, County Engr., Fredericksburg. (Lately noted inviting bids.)

Tex., Georgetown.—Williamson County Commissioners, F. D. Love, Judge; construct 11.3 mi. bituminous-topped road on Highway No. 2; \$70,329.60; R. A. Nichols, County Engr.

Tex., Gilmer.—Upshur County Comms., Wm. D. Walker, Judge; construct 25.8 mi. Highway No. 11; proposed; Wilder & O'Neal, County Engrs., Mt. Pleasant, Tex.

Tex., Jasper.—Jasper County Comms., C. C. Brown, Judge; construct section of High-

way No. 8; bids until Nov. 30; C. P. Hunter, County Engr. (See Machinery Wanted—Road Construction.)

Tex., Mt. Pleasant.—Titus County Comms., J. W. Tabb, Judge; construct 20.2 mi. Highway No. 35; \$209,321; proposed; Wilder & O'Neal, County Engrs.

Tex., Oak Cliff.—City Comms.; awarded paving contracts: Uvalde Paving Co., Dallas, Tex., \$66,091.73, pave 9th St., and Texas Bitulithic Co., Dallas, Tex., \$30,713.39, pave 10th St.

Tex., Olton.—Lamb County Comms., R. C. Hopping, Judge; construct 26.06 mi. Highway No. 7; bids until Nov. 29; C. L. Hasie Engineering Co., Engrs. (See Machinery Wanted—Road Construction.)

Tex., Orange.—Orange County, D. C. Bland, Judge; construct Orange-Beaumont Rd.; 5 mi.; concrete; \$263,801.13; Houston Construction Co., Contr., Houston, Tex. (Lately noted inviting bids)

Tex., Quitman.—Wood County Comms., B. F. Cathey, Judge; construct highway No. 15; S. B. Davis, Engr.

Tex., San Antonio.—City; improve Somerset Rd.; \$117,865.50; Hans Helland, City Engr.

Tex., San Angelo.—Tom Green County Commissioners, Chas. T. Paul, Judge; construct 4 mi. gravel road on Highway 7 and 7A; proposed; \$112,000; J. E. Beavers, County Engr.

Tex., San Antonio.—City; improve Hackberry, North Pecos and Johnson Sts., McCullough and Hammond Aves., etc.; pave 4 alleys with reinforced concrete; bids until Dec. 9; Hans Helland, City Engr.

Tex., San Antonio.—City Comms.; extend Lakeview Ave. from San Pedro Creek to connect with Avenue C; 1340 ft.; width 55.6 ft.; contract to Wm. Reilly at \$1250 for sidewalks and driveways at Fire Stations 2, 7, 10, 11 and 14.

Tex., San Antonio.—Bexar County Comms., A. McCloskey, Judge; construct 5.1 mi. bituminous macadam road on Highway No. 27; Federal-aid Project No. 217; proposed; C. E. Hoff, County Engr.

Tex., Stamford.—City; pave 18 blocks; contract let; pave other streets; proposed. Address The Mayor. (Supersedes recent item.)

Tex., Sherman.—Grayson County Comms., Dayton B. Steed, Judge; construct 10.1 mi. Highway No. 12B; \$68,087.08; Womack Construction Co., Contr.; Julian C. Field, County Engr.

Tex., Tyler.—Smith County Comms., W. R. Castle, Judge; construct 2.7 mi. Highway No. 37; gravel surfacing; \$44,000; D. K. Caldwell, County Engr.

Tex., Waco.—City; pave streets; voted \$100,000 bonds. Address The Mayor. (Lately noted to vote.)

Tex., Wichita Falls.—City; improve Eighth, Ninth, Ave. A and Grant St.; construct 35,056 sq. yds. pavement; concrete, bitulithic, rock asphalt, sheet asphalt or asphaltic concrete on broken stone or concrete foundation; 17,983 lin. ft. curbs, etc.; bids until Dec. 6. Address The Mayor. (See Machinery Wanted—Paving.)

Va., East Radford.—Radford Improvement Corp., G. A. Sullivan, Secy.; grade streets, sidewalks and construct sewers; \$50,000.

Va., Fairfax.—Fairfax County Comms.; construct roads; voted \$500,000 bonds.

Va., Richmond.—State; construct roads; voted amendment to constitution providing for \$40,000,000 and \$50,000,000 serial bonds; G. P. Coleman, Commr.

W. Va., Beckley.—Raleigh County Comms.; construct 5 mi. road from Colcord east to Artie in Clear Fork Dist.; bids opened.

Sewer Construction.

Fla., West Palm Beach.—City Commrs.; construct sewers, pave streets, etc.; sold \$250,000 bonds.

Ky., Louisville.—City; expend \$70,000 for sewer construction; 36 to 12-in. vitrified pipe and segment tile; K. A. Barker, Henry Bickel Co., L. R. Figg, Contrs.

Md., Hagerstown.—City; complete sewer system; vote in March on \$140,000 bonds; J. F. Ferguson, City Surveyor.

Miss., Sanatorium.—Mississippi State Board of Health, Dr. Harvey McNeill, Prest., Jackson, Miss.; Dr. Henry Boswell, Supt., Sanatorium; construct sewerage addition; \$20,000; Ben Price, Archt., 1420 Jefferson County Bank, Birmingham, Ala.

Mo., Springfield.—City; construct sewer system; Mr. Culler, Engr.

N. C., Smithfield.—Town, W. L. Fuller, Clk.; construct sewer and water systems; issued \$60,000 bonds.

S. C., Seneca.—Town, W. F. Austin, Chrmn.; construct sewer and water systems; vote Dec. 15 on \$160,000 bonds. (Supersedes recent item.)

Tex., Dallas.—City, Carl Moseley, Street Commr.; construct \$200,000 storm sewer on Pacific Ave.; length 1 mi.

Tex., Fort Worth.—City, Jas. C. Liston, City Secy.; lay storm sewers and water mains on Evans Ave.; cost \$5000.

Tex., Eastland.—City, W. Lander, Mgr.; improve storm and sanitary sewer systems; issued \$250,000 bonds.

Tex., San Antonio.—City; construct sanitary sewers in Knob Hill Dist.; Elder Construction Co., Contr. (Lately noted inviting bids.)

Tex., Wichita Falls.—City, Geo. W. Thornburn, Clk.; construct storm sewers; vitrified clay pipe; 55 inlets; 5 manholes; 62 yds. concrete; 1320 sq. yds. paving replacement; 145 yds. riprap; 160 ft. piling; bids until Nov. 29; J. Montgomery, City Engr. Lately noted voted \$200,000 bonds. (See Machinery Wanted—Sewer Construction.)

Va., Radford.—Radford Improvement Corp., G. A. Sullivan, Secy.; develop 225 acres for suburban section; construct sewerage, street and sidewalk grading; \$50,000.

Shipbuilding Plants.

Tenn., Memphis.—Boats.—F. O. Bletcher; interested in establishing company; mfrs. river boats; F. T. Rurritt, E. T. Hutchings, Engrs., Louisville, Ky.

Tex., Orange.—Steel Ships.—Southern Dry Dock & Shipbuilding Co.; increased capital from \$100,000 to \$200,000; erect plant for car building, fabricated steel construction and general woodworking.

Telephone Systems.

Fla., Miami.—South Atlantic Telephone & Telegraph Co., Frank B. Shutts, Prest.; erect 2-story 80x108-ft. exchange building; install automatic system; \$175,000; E. R. Wolfe Construction Co., Contr.

Tex., Port Arthur.—Bureau Yards and Docks, Navy Dept., Washington, D. C.; erect 14x39-ft. radio building; bids until Dec. 15; Spec. 4328. (Lately noted to erect building and tower.)

Va., Roanoke.—Chesapeake & Potomac Telephone Co., N. O. Wood, Mgr.; expend \$70,000 on plant improvements; extend underground cable and conduit system; lay aerial cables, etc. (Lately noted to expend \$200,000 on system.)

W. Va., Huntington.—Chesapeake & Potomac Telephone Co., W. T. Williamson, Div. Mgr.; expend \$55,000 on plant improvements; install switchboard and telephone cables, etc.

Textile Mills.

Ga., Gainesville.—Cotton Yarns.—Georgia Mfg. Co., W. R. Randle, Propr.; rebuild burned main plant structure.

La., New Orleans.—Twine.—International Harvester Co., Chicago, Ill.; erect twine factory and export warehouse; \$3,000,000; distributing plant for tools, mch. and twine; 28-acre site with 600-ft. river frontage; arranged with Dock Board for erection of docks to cost about \$250,000.

N. C., Greensboro.—Cotton Cloth.—Watts Spinning Co.; increased capital from \$250,000 to \$800,000.

N. C., Tarboro.—Cotton Goods.—Hart Cotton Mills; increased capital from \$250,000 to \$1,000,000.

Tenn., Knoxville.—Cotton Cloth.—Brookside Mills, Lyman W. Gale, Treas., 50 Congress St., Boston, Mass.; construct 2-story 222x195x143-ft. plant addition; concrete and brick construction; install 600 looms for weaving; purchased; F. P. Sheldon & Son, Archts.-Engrs., R. I. Hospital Bldg., Providence, R. I.; Aberthaw Construction Co., Gen. Contr., Peters Bldg., Atlanta, Ga., and 27 School St., Boston, Mass. (Previously noted to erect plant addition.)

Tex., Hillsboro.—Cotton Duck.—Hillsboro Cotton Mills; enlarge plant. (Lately noted increasing capital from \$90,000 to \$300,000.)

Tex., West.—Cotton Goods.—Brazos Valley Cotton Mill Co. increased capital from \$100,000 to \$200,000.

Water-Works.

Ark., Conway.—Town; contemplates extending water-works. Address Town Clerk.

Fla., Jacksonville.—Noles Water Filter Co. Incptd.; capital \$25,000; J. H. Braden, Prest.; T. R. Miller, V.-P. and Gen. Mgr.; Mrs. J. R. Parker, Secy.

Fla., Pensacola.—City Commrs.; lay 6-in. water mains on Blount and 20th Sts. to 16th and Gadsden Sts.; has plans.

Md., Baltimore.—Dam.—City; expend \$5,500,000; raise Loch Raven concrete dam 240 ft.; increase pondage of water to yield 146,000,000 gals. daily; William A. McGraw, City Engr.

Miss., Sanatorium.—Mississippi State Board of Health, Dr. Harvey McNeill, Prest., Jackson, Miss.; Dr. Henry Boswell, Supt., Sanatorium; install water supply; \$10,000; Ben Price, Archt., 1420 Jefferson County Bank, Birmingham, Ala.

Mo., Jefferson City.—Jefferson City Light, Heat & Power Co.; construct reservoir.

Mo., Pineville.—Ozark Electric & Mfg. Co. organized; C. D. Resler, Prest.; P. L. Carnel, V.-P.; Al York, Secy.; Jasper Strong, Treas.; develop water resources of Rosserman mill and dam.

N. C., Smithfield.—Town, W. L. Fuller, Clk.; construct water and sewer systems; issued \$60,000 bonds.

Okla., Tulsa.—City; improve water-works; vote on \$5,000,000 bonds; Holway Eng. Co., Engr., 250 Lynch Bldg. (Supersedes recent item.)

S. C., Seneca.—Town, W. F. Austin, Chrmn.; construct water and sewer systems; vote Dec. 15 on \$160,000 bonds. (Supersedes recent item.)

Tenn., Nashville.—City; improve water-works; Chester & Fleming, Conslt. Engrs., Union Bank Bldg.

Tex., Big Spring.—City; construct 1,500,000-gal. reservoir; increase water supply. Address The Mayor.

Tex., Eastland.—City, W. Lander, Mgr.; improve water system; issued \$150,000 bonds.

Tex., Fort Worth.—City, Jas. C. Liston, City Secy.; lay water mains and storm sewers on Evans Ave.; cost \$5000.

Tex., Sherman.—City, W. G. Banks, Clk.; sink well to Trinity sands at Fairview pumping station; depth, 2500 ft.; issued \$40,000 bonds; White-Green Drilling Co., Contr., Dallas, Tex. (Supersedes recent item.)

Tex., Terrell.—City; expend \$300,000 on water-works improvement; construct 4000-ft. dam; average height 16 ft.; 120,000 cu. yds.; L. W. Wells, Engr.; Weatherford & Becknall, Contrs. (Lately noted to construct reservoir.)

W. Va., Buckhannon.—Buckhannon Light & Water Co. reorganized; Enoch Bellis, Prest.; W. D. Fleming, V.-P.; G. O. Young, Secy.-Treas.; H. R. Wilson, Mgr.; expend \$5000; install 300 H. P. engine, 300 H. P. boiler; contemplate building 350 K. W. power line.

Woodworking Plants.

Ala., Dothan.—Boxes, etc.—Dothan Milling & Mfg. Co.; rebuild burned lumber shed; loss \$30,000.

Fla., St. Petersburg.—Toys.—H. & A. Wood Products Co. organized; capital \$50,000; William E. Hooker, Prest.; M. F. Albright, V.-P.; Harold J. Albright, Secy.-Treas.; mfrs. toys, kindergarten furniture, etc.

Ky., Louisville.—Caskets.—United Casket Co., Gerard E. Zimmerman, Prest., 412 Louisville Trust Bldg.; acquired 40,000 sq. ft. space in building; establish plant. (Supersedes recent item.)

La., Lafayette.—Sash and Doors.—Lafayette Sash & Door Co. Incptd.; capital \$25,000; Pothier J. Voorhies, Prest.; Camille Hebert, V.-P.; Renald J. Voorhies, Secy.-Treas.

Tenn., Clarksville.—Shuttles.—A. N. Lewis, Dover, Tenn.; establish shuttle factory; install mch.

Tenn., Memphis.—Handles.—Turner, Day & Woolworth Handle Co., W. C. Jackson, Asst. Mgr., Thomas and Plum Sts.; rebuild burned plant; loss \$100,000.

Tex., Orange.—Woodworking.—Southern Dry Dock & Shipbuilding Co.; increased capital from \$100,000 to \$200,000; erect plant for general woodworking, car building and fabricated steel construction work.

Fire Damage.

Ala., Birmingham.—Consolidated Motor Car Co.'s building; 1st Ave. and 23d St.; loss \$120,000.

Ala., Carrollton.—L. L. Jay's residence, near Carrollton.

Ala., Contopa.—T. J. Jones' store; loss \$5000.

Ala., Dothan.—M. F. Damon's residence.

Ala., Dothan.—Dothan Milling & Mfg. Co.'s lumber shed; loss \$30,000.

Ala., Electric.—Methodist Church. Address The Pastor.

Ala., Hamilton.—J. W. Stanley's drug store; loss \$9000.

Ala., Monroeville.—Monroe Furniture Co.'s building; loss \$10,000.

Ark., Conway.—City Meat Market; W. M. Harrell & Co.'s building; loss \$50,000.

Ark., Dermott.—Fee-Clayton Hardwood Lumber Co.'s plant; loss \$150,000.

Ark., Lepanto.—Portis Mercantile Co.'s cotton compress and gin; loss \$40,000.

Ark., Lepanto.—Portis Mercantile Co.'s cotton gin and compress; loss \$20,000.

Ark., Magnolia.—Columbia Compress Co.'s plant; loss \$275,000.

Fla., Tallahassee.—Irwin Gates' residence, N. Gadsden St.

Fla., Panama City.—Bay County courthouse; loss \$110,000. Address County Commrs.

Ga., Abbeville.—Geo. W. Doster, A. T. Baker and S. F. Sapp's stores.

Ga., Culloden.—Cullen Davis' residence.

Ga., Dearing.—School building. Address Board of Education.

Ga., Gainesville.—Georgia Mfg. Co.'s main plant building; loss \$60,000.

Ga., Louisville.—A. R. Berry's residence, near Louisville.

Ga., Sandersville.—Holt & Bro.'s livery stables, loss \$18,000; May & Co.'s grocery store.

Ga., Sycamore.—David Cravey's grist and feed mill.

Ky., Bowling Green.—Robert Crump & Son's garage; loss \$10,000.

Ky., Chaplin.—Jenkins & Ruby's store; J. W. Jenkins, J. J. Whitehouse and I. B. Irwin's residences; Chaplin State Bank; Claude Graham's store; loss \$40,000.

Ky., Hickman.—R. L. Cobb's residence, near Hickman.

La., New Orleans.—State Dock Board's wharves; loss \$600,000.

Md., Baltimore.—Heyman Harris' building, 203 N. Eutaw St.; loss \$30,000.

Miss., Biloxi.—J. H. Johnson's turpentine still; loss \$10,000.

Miss., Seminary.—Stewart & Hemister's building, \$50,000; J. M. Kelly & Co.'s building, \$7800; Dr. C. W. Cranford's office.

Miss., Yazoo City.—Mount Vernon Church (address The Pastor); Mississippi Grocery & Grain Co.'s building, 310 Mound St.

Okla., Pirtle.—A. L. Hicks & Co.'s store.

Okla., Tipton.—First Natl. Bank Bldg.; loss \$16,000.

S. C., Anderson.—W. T. McClure's ginney; loss \$25,000.

S. C., Bishopville.—Dixie Lumber & Mfg. Co.'s planing mill.

S. C., Bishopville.—Lee County Milling & Trading Co.'s warehouse.

S. C., Charleston.—L. H. Bennett Bag & Burlap Co.'s warehouse, 181 Bay St.; loss \$10,000.

S. C., Dillon.—Frank Huggins' store and market.

S. C., Hamer.—D. McDuffie's 2 stores; loss \$15,000.

S. C., Olympia.—Crystal Ice Plant, Fred Kortright, Propr.; loss \$40,000.

S. C., St. Mathews.—Harrington C. King's residence.

Tenn., Dyersburg.—Hal Graig's residence, near Dyersburg.

Tenn., Memphis.—Turner, Day & Woolworth Handle Co.'s plant; loss \$100,000.

Tex., Caddo.—Briarwood Hotel; Tourists Hotel; Winston-North Grocery Co.'s building; Dixie Theater; loss \$75,000.

Tex., Dallas.—Lamberth Motor Co.'s building, owned by Sidney Reinhardt; loss \$50,000.

Tex., Gatesville.—D. B. Pennington's cotton gin; loss \$10,000.

Tex., Lockhart.—Sears Mfg. Co.'s knee-pad factory; loss \$25,000.

Tex., Forrester.—J. J. Spires and Ira W. Phelps' stores; loss \$50,000.

Tex., Lamesa.—Lamesa High School. Address Board of Education.

Tex., Marlin.—Exporters & Traders' Compress Co.'s warehouse, compress and 2300 bales cotton; loss \$400,000.

Tex., Murchison.—Ard Drug Co., J. D. Browning, T. P. Luker, S. G. Scott and Bob Ard's buildings; Eads Bldg., owned by Frank Murchison, Athens; Elledge Bros.' 3 buildings; loss \$40,000.

Tex., Quinlan.—Stewart & Wade Lumber Co.'s plant; loss \$15,000.

Va., Gordonsville.—Allen Potts, Richmond; country home near Gordonsville; loss \$30,000.

Va., Port Conway.—Wm. H. Allen, Jr., and Brant Elliott's store.

W. Va., Warwood.—Wheeling Steel Castings Co.'s office building and pattern shop; loss \$30,000 to \$40,000.

W. Va., Wheeling.—Wheeling Steel Castings Co.'s pattern shop at Warwood; loss \$30,000 to \$40,000.

Bank and Office.

Ala., Birmingham.—Chamber of Commerce, O. L. Bunn, Secy.; erect 3-story building.

Ky., Owensboro.—Chamber of Commerce, Marc Stuart, Prest.; erect building, Fred-erica St.

La., Opelousas.—T. G. Chachere, P. O. Box 256; preparing plans for \$15,000 office building; brick.

Md., Baltimore.—Standard Oil Co., Pier 2, Pratt St.; erect \$1,500,000 office building, Courtland and Franklin Sts.; about 15 stories; 90x140 ft.; fireproof; brick and marble; steel; limestone; concrete foundation; steel sash; slag roof; 2 passenger and 1 freight elevators; Clyde N. Friz, Archt., Lexington Bldg.; J. Henry Miller, Inc., Contr., Franklin and Eutaw Sts. (Lately noted.)

Okla., Henryetta.—North American Producers Corp.; plans to erect 5-story office building.

Tex., El Paso.—State National Bank, C. R. Morehead, Prest.; erect \$200,000 building, San Antonio and Oregon Sts.; 1 story and mezzanine; 48x120 ft.; concrete and steel; composition over concrete slab roof; marble tile and concrete floors; vapor steam heat; hydraulic elevators; hollow fireproof tile; ornamental terra-cotta; interior tile; metal doors; vaults; vault lights; ventilators; steel and sash trim; bids received until Nov. 27 by Trost & Trost, Archts.; Remington Co., Los Angeles, Contr. for interior of building and equipment. (Lately noted.)

W. Va., Clarksburg.—Morgantown Coal Co.; convert residence, High St., into offices; plan later to erect office building.

Churches.

Ala., Birmingham.—Wesleyan Methodist Church, F. J. Kewis, Chrmn. Comm.; convert building 312-314 N. 23d St. into church.

Ala., Clanton.—Presbyterian Church; erect building. Address The Pastor.

Fla., Groveland.—Methodist Episcopal Church; erect \$20,000 frame building; F. H. Trimble, Archt., Orlando.

Fla., Jacksonville.—Tabernacle Baptist Church, Rev. W. C. Brown, Pastor; erect \$25,000 building; 50x90 ft.; pine and oak floors; asbestos and composition shingle roof; heating plant \$350; electric lights; W. A. Rayfield & Co., Archts., Birmingham, Ala.

Fla., Jacksonville.—First Christian Church, Rev. W. E. Harlow, Pastor; erect \$75,000 building; 60x100 ft.; semi-fireproof; asbestos shingle roof; oak and pine floors; hot-water heat; electric lights; W. A. Rayfield & Co., Archts., Birmingham, Ala.

Fla., Okeechobee.—Board of Church Extension, Louisville, Ky.; erect \$15,000 Methodist Church; concrete tile.

Ky., Louisville.—First Presbyterian Church, 4th and York Sts.; plans to erect \$100,000 building, 1st and Armsly Sts. Address the Pastor.

Md., Baltimore.—Chizuk Amunoh Congregation, McCulloh and Mosher Sts.; erect \$400,000 synagogue, Eutaw Pl. and Chauncey Ave.; stone and brick; 85x120 ft.; basement only to be constructed at present; \$90,000; Jos. Evans Sperry, Archt., Calvert Bldg.; Barre Construction Co., Equitable Bldg., Contr. for foundation and concrete walls. (Lately noted.)

Miss., McComb.—J. J. White Lumber Co., H. L. White, Prest., Columbia; erect \$60,000 memorial church.

N. C., Mt. Airy.—Rev. G. W. Williams; plans to erect Methodist tabernacle, Rockford St.

Tex., Galveston.—Thirty-third Street M. E. Church, South, J. I. Toothaker, interested; plans to erect Sunday-school building.

BUILDING NEWS

BUILDINGS PROPOSED

Apartment-Houses.

Ala., Mobile.—William McDonald, William F. Clark, Jr., and others; erect \$300,000 brick apartment-house, Government and Charles Sts.; fireproof; 6 stories; 50 suites; dining-room; 2 passenger elevators, 1 service elevator; refrigerating plant; vacuum cleaning system; garages.

Fla., Lake Worth.—Marie Greer; erect addition to apartment-house, Dixie Highway; plans later to erect apartment-house.

Fla., Lake Worth.—C. W. Waterman; erect 4-suite apartment-house, J. St., near Luzerne.

Fla., Tampa.—C. J. Hyer; erect \$10,000 two-story apartment-house, 812 S. Oregon Ave.

Fla., Tampa.—Frederic Mayes; erect \$17,000 two-story apartment-house, 1004 Swan Ave.

Fla., West Palm Beach.—E. C. Cross; erect \$12,000 apartment-house; 2 suites; frame; 3-car garage; Agnes Ballard, Archt.

Ga., Columbus.—National Showcase Co.; erect \$150,000 apartment-house; 109x130 ft.; 3 stories and basement; hollow tile and rough texture brick; stone trim; green tile cornice; built-up roof; "U"-shaped; 4 sections; 25 suites; cafe in basement; steam heat; 16

garages; Chas. F. Hickman and John C. Martin, Archts., Exchange Bldg. (Lately noted.)

Tex., Fort Worth.—R. G. Brooker; erect 2-story brick-veneer apartment-house, 914 Henderson St.

Tex., Houston.—William Mendovitz; erect 2-story apartment-house, 1908 Austin St.

Tex., Houston.—D. E. Smith; erect 2-story, 30-room apartment-house, 1200 Elysian St.; frame and stucco.

Association and Fraternal.

Ky., Harlan.—Minelga-Harlan Coal Co.; construct Y. M. C. A. (See Dwellings.)

Ky., Louisville.—Masonic Widows and Orphans' Home Board, Lee E. Cralle, Chrmn.; erect \$1,000,000 building; date of construction indefinite.

La., Lake Charles.—N. B. Williamson Post, American Legion; plans to erect building.

Miss., Jackson.—Council No. 848, Knights-of-Columbus; erect home.

N. C., Canton.—Knights of Pythias; erect \$50,000 three-story brick building, Main St.

Tenn., Memphis.—Lodge No. 153, Loyal Order of Moose, Julian Rothschild, Dictator; erect home.

Tex., Grandview.—Mrs. Cad. T. Wilkerson; bids until Dec. 1 to erect 1-story brick church; plans and specifications from Mrs. Wilkerson.

City and County.

Ala., Bessemer.—City Hall.—City; erect addition to City Hall. Address The Mayor.

Ala., Birmingham.—Library.—City, Lloyd M. Josselyn, City Librarian; considering erection of \$600,000 Carnegie Library.

Ala., Selma.—City Stables.—Public Building Comm., J. W. Robinson, Chrmn.; erect \$13,000 addition to city stables; 80x90 ft.; concrete and brick; metal roof; concrete floors; electric lights; John W. McNeil, Archt. Address Rutledge & Parson. (Lately noted.)

Fla., West Palm Beach.—City Hall.—City Comms.; sold \$250,000 bond issue for improvements, including city hall and jail.

Miss., Hattiesburg.—Schools, etc.—City, T. E. Batson, Mayor; voted \$365,000 bonds; \$100,000 for city hall, \$244,000 for 2 school buildings; \$6000 for repairs to school buildings, \$15,000 for fire equipment; R. E. Lee, Archt. (Lately noted.)

Okla., Miami.—Library.—City; erect \$13,000 library. Address The Mayor.

Okla., Tulsa.—Farm Building.—County Commissioners, Lewis Cline, County Clk., Court-house; bids until Dec. 6 to erect 1-story stone building and install plumbing and steam heating, county poor farm, near Tulsa; \$65,000. (Lately noted.)

Va., Portsmouth.—Fire Station.—City, J. P. Jervy, City Mgr.; bids until Dec. 1 to construct brick fire station, Lincoln and Virginia Sts.; bids for work as a whole and also separate bids for brick work, plumbing and heating, roof and gutters, concrete work, carpentering, etc.; plans and specifications at office of M. L. Parker, Building Inspector, Municipal Bldg. (Lately noted.)

Dwellings.

Ala., Florala.—Mr. Hughes; expend \$10,000 to remodel residence; 2 stories; brick; colonial type; Wm. W. Alfred, Archt., P. O. Box 271, Pensacola, Fla.

Fla., Daytona.—Jos. J. Paris; expend \$25,000 to \$35,000 to improve residence.

Fla., Delray.—Kirby Milton; plans to erect 4 cement bungalows.

Fla., Delray.—H. G. Higley, Niles, O.; erect 4-room bungalow.

Fla., Lake Worth.—F. H. Smith; erect 3 bungalows, J St.

Fla., Lake Worth.—J. H. Stull; erect bungalow, M St., near 10th Ave.

Fla., Palatka.—United States Sugar Corp., Philadelphia, H. A. Johns, V.-P. and Mgr. pro tem., Box 42, Palatka; erect 12 four-room dwellings in connection with proposed sugar refinery near Palatka.

Fla., St. Petersburg.—Fred Scott; erect residence.

Fla., St. Petersburg.—Charles H. Kicker; erect three 1-story dwellings, Locust St. and 12th Ave.; \$15,000.

Fla., St. Petersburg.—Dr. A. T. Hudson; erect \$7500 dwelling, 7th St. N., between 7th and 8th Aves.

Fla., St. Petersburg.—Mathis & Summer; erect 3 one-story dwellings, Pine St., between 5th and 7th Ave. North; \$10,500.

Fla., St. Petersburg.—Jas. D. Hay; erect three 1-story dwellings, 7th Ave. South, 8th Ave. North, and 9th Ave. North; \$20,500.

Ga., Columbus.—F. Roy Duncan, Exchange Bldg.; preparing plans for 2 duplex dwellings; stucco on brick or tile; composition shingle roof; hot-water heat; interior tile; pine floors; day labor.

Ga., Columbus.—W. T. Harvey Lumber Co.; erect 40 frame dwellings; 4 rooms each.

Ga., Columbus.—J. E. Humes; remodel residence and erect 1-story addition; frame; furnace heat; Chas. F. Hickman and John C. Martin, Jr., Archts., Exchange Bldg.

Ga., Columbus.—Dr. J. H. Mahaney; remodel frame residence; construct new roof and porches; Chas. F. Hickman and John C. Martin, Jr., Archts., Exchange Bldg.

Ga., Columbus.—Major J. Paul Jones; erect \$10,000 residence; 65x40 ft.; 1 story; 6 rooms and laundry; concrete; tile roof; steam heat; interior tile; Chas. F. Hickman and John C. Martin, Jr., Archts., Exchange Bldg.

Ga., Columbus.—Chas. H. Davis; remodel residence; frame; metal roof; F. Roy Duncan, Archt., Exchange Bldg.; day labor.

Ga., Savannah.—C. G. Anderson, Jr.; erect \$35,000 residence near Savannah; shell concrete; Italian style; tile roof; interior tile; warm-air heat; electric lights; J. de Bruyn Kops, Archt.; day labor.

Ga., Savannah.—Judge P. W. Meldrim; erect \$15,000 shingled residence near Savannah; Japanese style; stud and plaster partitions; tile roof; electric lights; gas heat; J. de Bruyn Kops, Archt.; day labor.

Ky., Harlan.—Minega-Harlan Coal Co.; construct 20 miners' houses, Y. M. C. A., school and coal tipple; contract at once.

Ky., Moseleyville.—R. L. Clark; erect \$12,000 residence near Moseleyville; 12 rooms; hollow tile; electric lights; steam heat; construction by owner.

Ky., Pikeville.—Mossy Bottom Coal Co.; construct 25 miners' houses, store and coal tipple.

Ky., Shelby Gap (P. O. Dorton).—Adamson Coal Co.; construct 12 miners' houses, tipple and coal bin; contract at once.

Ky., Stacy.—Yellow Creek Coal Co.; construct 12 miners' houses and coal tipple; contract at once.

La., Opelousas.—T. G. Chachere, P. O. Box 256; preparing plans for residence; brick; \$30,000.

Md., Baltimore.—Westphal & Schoenhals; erect 23 two-story brick dwellings, 2201-45 W. Lexington St.; 14.6x48 ft.; slag roof; furnace heat; \$55,000; Jos. F. Hirt, Archt., 829 N. Luzerne Ave.; construction by owner.

Md., Baltimore.—Frank Novak Realty Co., 33d St. near Tiffany Ave.; erect 14 dwellings, 1700-1723 E. 29 St.; \$55,000.

Mo., St. Louis.—Walter Jones Real Estate Co., Walter Jones, Prest., 618 Chestnut St.; erect 3 bungalows, Pershing Ave., and \$19,000 residence, 66 Aberdeen Pl.

N. C., Greensboro.—R. J. Hole; erect residence, Irving Park; Massachusetts colonial type; A. C. Wirth, Archt.

Okla., Henryetta.—Chamber of Commerce; organized \$50,000 building fund; erect 4 and 5-room cottages.

S. C., Spartanburg.—J. E. Shea; erect \$20,000 residence lately noted; 12 rooms; frame; slate roof; hardwood oak and concrete floors; hot-water heat; interior tile; S. P. Tinsley, Archt.; day work; supervision by owner. (See Machinery Wanted—Heating Plant; Plumbing.)

Tenn., Knoxville.—Industrial Home Corp. chartered; R. G. Wright, R. W. Perry, J. L. Burdett and others, incprts.; capital \$25,000; erect 164 dwellings for Holston Mfg. Co., Washington Ave.

Tenn., Nashville.—Meharry Medical College; erect \$12,000 dwelling, 1122 First Ave., South; brick; 2 stories; 10 rooms.

Tex., Houston.—M. H. Olson; erect 8-room residence, 227 Lenox St.

Tex., San Antonio.—H. B. Richardson; erect two 4-room dwellings, Pennsylvania Ave.; \$5000.

Tex., San Antonio.—J. R. Hufington; erect 6-room dwelling, French place.

Tex., San Antonio.—H. Rabe; erect \$5000 addition to residence, Cypress St.

Tex., San Antonio.—Mrs. Nellie Sands; erect \$14,500 residence, Dewey place; 8 rooms; brick and tile.

Va., Lynchburg.—C. G. Craddock, Jr.; erect \$18,000 residence; hollow tile, frame and stucco; tile or slate roof; hardwood floors; hot-water or vapor heat; electric lights; hollow fireproof tile; interior tile; Craighill & Cardwell, Archts.

Va., Portsmouth.—Forrest Nichols; erect frame bungalow, Ward Terrace.

Va., Portsmouth.—Vernon G. Bunting; erect frame bungalow, Maryland Ave., near 1st St.

Government and State.

Tex., San Antonio.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supvr. Archt., Washington, D. C.; erect 1-story addition to postoffice; 5000 ft. floor space.

Hospitals, Sanitariums, Etc.

Ala., Mobile.—Mobile Infirmary; erect \$50,000 nurses' home; 2 stories; 40x90 ft.; brick; concrete and wood floors; composition roof; metal lath and plaster; steam heat; electric lights; interior tile; C. L. Hutchisson, Archt., Emanuel Bldg. (Lately noted.)

Fla., Tampa.—Florida Baptists, C. W. Duke, 100 Cardy St., interested; plan to erect \$500,000 hospital.

Ga., Savannah.—Chatham-Savannah Tubercular Assn.; erect sanitarium.

La., Alexandria.—United States Public Health Service Hospital, Camp Stafford; plans to rebuild structure lately noted burned; V. V. Lamkin, Secy. Rotary Club, interested.

Md., Baltimore.—State; erect \$80,000 hospital for criminal insane; 40x80 ft.; brick; slate roof; concrete slab floors; heating plant, \$7000; lighting plant, \$3000; hollow fireproof tile; Henry P. Hopkins, Archt., 347 N. Charles St.; bids opened Feb. 1.

Miss., Sanatorium.—Mississippi State Board of Health, Dr. Harry McNeill, Prest.; Jackson; erect \$1,463,000 tuberculosis sanitarium, Dr. Henry Boswell, Supt.; fireproof; brick, concrete and frame; infirmary, service building, children's building, school, nurses' home, employees' houses, auditorium, negro infirmary, farm buildings, 14 cottages, etc.; heating and lighting plant, \$65,000; Bem Price, Archt., 1430 Jefferson County Bank, Birmingham, Ala. (Lately noted.)

Tenn., Knoxville.—Eastern Hospital for Insane, Dr. Smith, Supt.; bids until Nov. 25 to erect tuberculosis hospital.

Tex., Cisco.—City; voted \$60,000 bonds to purchase Britton school property and convert into hospital. Address The Mayor. (Lately noted.)

Hotels.

Ga., Columbus.—Chas. E. Walton; improve and erect 5-room addition to Terminal Hotel; Chas. F. Hickman and Jno. C. Martin, Jr., Archts., Exchange Bldg.

Okla., Henryetta.—Barkley Morgan; erect 5-story hotel; 300 rooms.

W. Va., Morgantown.—Morgantown Hotel Co., Dr. I. C. White, W. E. Hunter, J. L. Keener, incorporators; erect \$600,000 hotel, High St. (Lately noted.)

Miscellaneous.

Fla., St. Petersburg.—Undertaking Establishment.—J. W. Wilhelm Undertaking Co.; erect \$30,000 to \$40,000 building; 3 stories; hollow tile, brick and stone; electric lights; chapel, 48x24 ft., to have built-in organ; apartments on second and third floors; Edgar Feltham, Archt.

Fla., St. Petersburg.—Memorial Hall.—Historical Memorial Society; construct memorial hall of 3 units; Italian renaissance type; fireproof; auditorium to seat 1000; stage 36x33 ft.; Henry H. Dupont & Co., Archts.

Fla., Tampa.—Clubhouse.—Sacred Heart Church, Rev. J. E. Farrell, Pastor, Marion and Twigg Sts.; erect \$100,000 clubhouse, Marion and Madison Sts.; 4 stories; 53x114 ft.; reinforced concrete and brick; reinforced concrete floors.

Fla., Tampa.—Fair.—South Florida Fair Assn., Henry E. Snow, Director; erect buildings for Mexican display, poultry and swine exhibits; addition to main livestock building, remodel grandstand, construct bleachers, etc.

Ga., Columbus.—Undertaking Establishment. Chas. L. Torbet; improve building and erect 1-story addition; 98x54 ft.; brick; furnace heat; Chas. F. Hickman and Jno. C. Martin, Jr., Archts., Exchange Bldg.

Mo., Columbia.—Clubhouse.—Columbia Country Club; construct clubhouse.

Mo., Kansas City.—Memorial.—Liberty Memorial Assn.; erect building; taking competitive plans.

Tex., Spring Lake.—Clubhouse.—Spring Lake Country Club, Dr. W. R. Clifton, Chrmn. Bldg. Comm.; erect \$60,000 clubhouse; Italian renaissance type; 2 stories and basement; 100x88 ft.; concrete and stucco; tile roof; Milton W. Scott & Co., Archts., Waco. (Previously noted.)

Schools.

Ala., Albany.—City, E. C. Payne, Mayor; considering election on \$200,000 bonds to erect high school.

Ala., Birmingham.—Thorsby Institute, M. J. Soberg, Chrmn. Bldg. Comm.; erect kitchen and dining-room, first of several buildings contemplated; 1 story; 40x120 ft.; dining-room to seat 150; C. H. Thomsen, Archt., will supervise construction.

Fla., Crooked Lake.—Polk County Board of Public Instruction, Bartow; erect \$15,000 school; 5 classrooms and auditorium; brick and frame; Albert J. Poteet, Archt., Lakeland.

Fla., Eau Gallie.—Special Subtax School Dist. No. 3; votes Dec. 18 on \$40,000 bonds to erect school. Address County Superintendent of Public Instruction, Titusville. (Lately noted.)

Fla., Lake Worth.—Board of Public Instruction; erect school; \$38,500; F. H. Trimble, Archt., Orlando.

Fla., Tampa.—Hillsborough County School Board; erect school in Seminole Heights.

Fla., West Palm Beach.—Palm Beach County Board of Public Instruction, W. E. Keen, Supt.; erect 3 cement-block schools in Districts Nos. 1 and 4; \$165,000 bonds sold; F. H. Trimble, Archt., Orlando. (Lately noted.)

Ga., Savannah.—Board of Education, C. B. Gibson, Supt.; election Jan. 18 on \$1,500,000 school bonds. (Previously noted.)

Ky., Harlan.—Minelga-Harlan Coal Co.; construct school. (See Dwellings.)

La., Natchitoches.—Board of Education; erect high school, community auditorium and library; \$150,000 bonds voted. (Lately noted.)

Md., Westminster.—Western Maryland College, Rev. Dr. A. Norman Ward, Prest.; con-

templates erecting 10 buildings, stadium to seat 2500, and athletic field; also reconstruct several present structures.

Miss., Hattiesburg.—City, T. E. Batson, Mayor; voted \$365,000 bonds, including \$244,000 for 2 school buildings and \$6000 for repairs to buildings; R. E. Lee, Archt. (See City and County.)

Mo., Cape Girardeau.—School Board; plans to issue \$54,000 bonds to complete Central High School annex and erect ward school.

Mo., Springfield.—Board of Education; erect 3 junior high schools; each 63x175 ft., wing 58x72 ft.; reinforced concrete; hollow fireproof tile; ornamental terra cotta; tar and gravel roof; wood, concrete and composition floors; wire glass; ventilators; steam heat; electric lights; plans ready about Jan. 15; Hawkins & Hoener, Archts., 400 McDaniel Bldg. (Lately noted.)

Mo., St. Louis.—Washington University, Shinker St. and Lindell Blvd.; erect building for law school; 48x187 ft.; granite and Bedford stone walls; cement floors; slate roof; vacuum steam heat; \$200,000; Jamieson & Spearl, Archts., 800 Security Bldg. (Lately noted.)

N. C., Cedar Rock.—Town votes Dec. 7 on school bonds not to exceed \$20,000; J. P. Timberlake, Chrmn. Board of County Commrs., Louisville.

N. C., Charlotte.—City School Board, H. P. Harding, Supt.; erect \$200,000 to \$300,000 industrial high school in Belmont. (Previously noted to have voted \$750,000 school bonds)

N. C., East Spencer.—School Board; erect \$40,000 to \$50,000 annex; 6 classrooms and auditorium; brick; wood floors; heating plant for 12 classrooms and auditorium. Address C. A. Sides. (Previously noted.)

N. C., Greensboro.—City Board of Education; erect schools; election Jan. 18 on \$1,000,000 bonds.

N. C., Monroe.—School Board, W. B. Love, Chrmn.; erect high school; election Dec. 14 on \$200,000 bonds.

N. C., Sedalia.—School Board; erect \$30,000 building.

S. C., Greer.—City Board of Education; erect \$90,000 to \$100,000 high school; 14 rooms, auditorium and gymnasium; semi-fireproof; brick walls; ornamental terra-cotta; metal, tile or slate roof; concrete and hardwood floors; interior tile; metal ceilings and doors; rolling partitions; wire glass; steel sash and trim; ventilators; bids opened about Jan. 1. Address W. H. Ward, Supt. of Schools. (Lately noted.)

Tenn., Memphis.—Board of Education, Hardwig Peres, Chrmn.; erect \$28,000 building.

Tex., Austin.—University of Texas; construct \$250,000 dormitory and \$250,000 Confederate memorial arch.

Tex., Lamesa.—Board of Education; erect \$70,000 brick building to replace Lamesa High School noted burned.

Tex., Wichita Falls.—Wichita Falls Independent School Dist.; erect 4 schools; 4, 8, 8 and 8 rooms; brick; tar and gravel roof; edge grain pine floors, concrete in basement; metal ceilings; accordion doors; steam heat in 2 structures, \$4000 each; electric lights, \$350; total cost \$200,000; contracts let about Dec. 15; Voelker & Dixon, Archts. Address W. W. Brown, 1518 12th St. (Lately noted.)

Tex., Weatherford.—City, Nolan Queen, Mayor; votes Dec. 16 on \$200,000 bonds to erect high school. (Lately noted.)

Va., Martinsville.—Town Council; plans election on \$250,000 bonds to erect high school; 50x100 ft.; hollow fireproof tile; brick walls; wood partitions; tar and gravel roof; ornamental terra-cotta; concrete and wood

floors; plaster board; steel sash and trim; rolling partitions; warm-air heat, fan system; ventilators; electric lights; W. C. Northup, Archt., Winston-Salem, N. C. (Previously noted.)

Va., Richmond.—City, Albert H. Hill, Supt. of Education; considering \$1,500,000 school bond issue.

Stores.

Fla., Daytona Beach.—J. W. Camack, Philadelphia; erect 11 stores, Main St.; 2 stories; apartments above; fireproof; Fuquay & Gheen, Archts.

Fla., Jacksonville.—A. M. Crabtree; erect \$5000 addition, Hogan St.

Fla., Jacksonville.—J. B. Cox; erect brick building, Davis St. between Union and State Sts.; \$8000.

Fla., Jacksonville.—H. Kirk; erect \$16,500 addition to building, 16th St., between Tree and Crehof Aves.

Ky., Mayfield.—Creason-McDonald Co. incorporated; capital \$60,000; R. H. Creason, Prest.; J. W. McDonald and W. H. Creason, V.-Pres.; J. H. Wells, Treas.; H. C. Albritton, Secy.; L. M. Creason.

Ky., Fleming.—S. H. Tolliver; construct store; contract at once.

Ky., Pikeville.—Mossy Bottom Coal Co.; construct store. (See Dwellings.)

Ky., Neon (P. O. Fleming).—Jno. L. Bentley; construct store; contract at once.

N. C., Charlotte.—Charlotte Co.; erect 4 storerooms, 1400 block South Tyron St.

N. C., Lumberton.—Frank Gough; erect store; 2 stories; concrete; plate-glass front.

Tex., Dalhart.—Dalhart Hardware Co.; erect \$25,000 building; 50x140 ft.; 1 story and basement; brick; composition roof; hardwood floors; metal ceilings; wire glass; ventilators; W. R. Kauffman, Archt., Amarillo. Address owner.

Tex., San Antonio.—Gus Heye; erect 2-story concrete building, Markey St.; \$20,000.

Va., Norfolk.—Wynn Lard & Provision Co.; erect \$40,000 building.

Theaters.

Fla., Daytona Beach.—J. W. Camack, Philadelphia; erect theater, Main and Coates Sts.; seating capacity 600 to 800; Fuquay & Gheen, Archts.

Ga., Atlanta.—Criterion Theater Co., Sig. Samuels, Prest.; expend \$40,000 to remodel Criterion Theater, 41 Peachtree St.

La., Opelousas.—T. G. Chachere, P. O. Box 256; preparing plans for remodeling theater; hollow fireproof tile; metal ceilings; plaster board; vaults; ventilators; \$14,000. (See Machinery Wanted — Hollow Fireproof Tile; Metal Ceilings; Plaster Board; Vaults; Ventilators.)

Warehouses.

La., New Orleans.—International Harvester Co., Chicago, Ill.; erect distributing warehouse and twine factory; \$3,000,000; 28-acre site, with 600-ft. river frontage.

Mo., Kansas City.—United States Register Co., J. R. Payne, Mgr., 510 W. 5th St.; erect warehouse and office building, 330-32 W. 5th St.; 3 stories; 42x100 ft.; brick; 4-ply slag roof; wood floors; \$45,000. (Lately noted.)

N. C., Charlotte.—Harry A. Franklin, 232 S. College St.; erect warehouse and office building; 1 story; 30x80 ft.; fireproof; steel.

N. C., Moncure.—Moncure Farmers' Cotton Warehouse, Incptd.; \$10,000 capital; C. D. Owen, Maddox Bros. and J. P. Womble.

Okl., Henryetta. — Wagner Supply Co., Fort Worth; erect warehouse.

Tex., Dallas.—Oliver Chilled Plow Works, J. D. Oliver, Prest., South Bend, Ind.; erect factory and warehouse, Market, Collins and Jefferson Sts.; fireproof; 284,000 sq. ft. floor space; \$500,000; advises does not contemplate building in near future and no information available.

Tex., Houston.—Old River Warehouse Corp. chartered; \$50,000 capital; G. W. Collier, A. R. Shearer and R. E. Goree, Inetrps.

Tex., Lockhart.—Claud A. McMillan, E. B. Coopwood, R. E. Brown and others; erect \$20,000 cotton warehouse

Tex., Mexia. — Farmers' Union Warehouse Assn.; plans to erect cotton warehouse.

BUILDING CONTRACTS AWARDED

Bank and Office.

Tex., Beaumont. — Beaumont Iron Works; erect \$50,000 office building and foundry; reinforced concrete; office building, 3 stories; 24x24 ft.; Tom Phillipson, Contr., Houston.

Va., Norfolk.—Twin City Permanent Building Assn.; erect \$30,000 office building, 111 W. Freemason St.; 2 stories; brick; T. D. Murden, Contr.

Churches.

Ala., Birmingham.—First Methodist Church South, J. A. Vann, Chrmn. Bldg. Com.; erect \$100,000 Sunday-school building; 2 stories; brick and terra-cotta; tile roof; Miller & Martin, Archts., Title Guarantee Bldg.; Peter E. Bostick, Contr., First Natl. Bank Bldg. (Previously noted.)

Fla., Jacksonville.—Snyder Memorial M. E. Church; erect \$16,000 brick addition to Sunday-school building; 25x30 ft.; 2 stories; tin roof; wood floors; Marks & Sheftall, Archts.; O. P. Woodcock & Co., Contrs. (Lately noted.)

Okl., Vinita. — First Methodist Church South, Rev. Jas. E. McConnell, Pastor; erect \$50,000 building; concrete, brick and stone; tile and asphalt roof; wood and cement floors; warm-air heat; hollow fireproof tile; rolling partitions; Butler & Saunders, Archts., 803 Kennedy Bldg., Tulsa; Love Bros., Contrs., Vinita. (Previously noted.)

Tex., Cameron.—First M. E. Church, South; erect \$100,000 building; 60x107 ft.; fireproof; concrete; tar and gravel roof; concrete floors; steam heat; conduit lighting; Waller, Silber & Co., Archts., 507 Bedell Bldg., San Antonio; J. E. Johnson, Contr., Waco. (Previously noted.)

City and County.

La., New Orleans.—Freight Shed, Board of Commrs., Port of New Orleans, W. O. Hudson, Prest., 200 New Orleans Court Bldg.; contract to P. H. Boh & Co. at \$802 for concrete work and shell fill at Poydras St. shed; Cope & Williams at \$6672 for paving in connection with shed. (Lately noted.)

Dwellings.

Fla., Orlando.—J. W. Rex; erect residence; A. N. Huggins, Contr.

Fla., Orlando.—N. T. Boylen; erect residence; E. R. Fleagin, Contr.

Fla., Plant City.—S. D. Adelson; erect 2 dwellings lately noted; \$4500 each; 5 rooms, bath and sleeping porch; brick foundations and flues; wood floors; F. W. Nulter, Archt. and Contr. (See Machinery Wanted—Brick; Hardware; Angle Irons; Bookcases; China Closets; Colonnades; Tile Trimblies.)

Ky., Esco.—Elkhorn & Shelby Creek Coal Co.; erect 20 frame miners' dwellings; 28x30 ft.; 4 rooms; 1 story; 3-ply composition roof; yellow pine floors; fire places; A. S. Short, Contr. (Lately noted.)

La., New Orleans.—W. S. Vernaci; erect \$7300 two-story frame dwelling, 3d and S. Robertson Sts.; Jensen Bros., Contrs.

Tex., Fort Worth.—Mr. McFadden, Mgr. Farar Lumber Co., Vickery St.; erect residence, 2800 block Ave. F; J. D. Hall, Contr.

W. Va., Bluefield. — F. S. Easley; erect \$30,000 residence; 2 stories and basement; 50x30 ft.; 12 rooms; stone; slate roof; oak floors; hot-water heat; Alex Mahood, Archt.; Larin Williams, Contr. (Lately noted.)

Hospitals, Sanitariums, Etc.

Tenn., Nashville.—Board of Managers, Davidson County Tuberculosis Hospital; erect \$15,000 kitchen; brick; fireproof; composition shingle roof; reinforced concrete floors; steam heat; electric lights; Asmus & Clark, Archts., 634 Stahlman Bldg.; T. J. Christman & Co., Contrs. (Lately noted.)

Hotels.

Ga., Atlanta.—Wade H. Davis, Healy Bldg.; erect \$25,000 hotel; 4 stories; 42x100 ft.; brick and frame; tile and wood floors; heating \$5500; lights \$2000; elevator \$4500; J. W. Jenkins, Archt.-Contr., 404 Silvey Bldg. (Lately noted.)

Okl., Chickasha.—Walker & Dickens; erect 2-story cafe and hotel; 25x100 ft.; metal ceiling; tar and gravel roof; yellow pine and concrete floors; \$10,000; Chas. Steckler, Contr., 628 S. 8th St.

Miscellaneous.

Fla., Tampa.—Cafe.—Manuel Garcia; remodel Hollandia Block, Franklin and Jackson Sts., for Plaza Cafe; 2 stories; brick; Hudnall-Jetton Contracting Co., Contr.

Ga., Atlanta.—Library.—Carnegie Library Assn.; erect branch library, Auburn Ave. and Hilliard St.; brick and hollow tile; 1 story and basement; \$39,800; Hentz, Reid & Adler, Archts.; Caldwell & Zin, Contrs.

S. C., Abbeville.—Community Building.—Abbeville Cotton Mills; erect \$40,000 community building; Fiske-Carter Constr. Co., Contr., Greenville.

Schools.

La., Pineville. — Louisiana College; erect \$300,000 building; 80x230 ft.; 3 stories; fireproof; reinforced concrete, hollow fireproof tile and brick; asbestos slate roof, American method; concrete and hardwood floors; metal bath and ceilings; cut-stone; cast cement; plaster; low-pressure steam vacuum heat, \$8000; lighting branched from central plant, \$7000; R. H. Hunt Co., Archt., Dallas. Address Jno. T. Willis, Contr., Pineville. (Previously noted.)

Mo., St. Joseph. — Board of Education, H. Loxing, Secy.; expend \$20,000 to remodel Garfield School; 3 stories and basement; Lawhon Constr. Co., Contr., 905 Edmond St.

Okl., Pershing.—School Board; erect \$40,000 school; 63x85 ft.; stone; built-up roof; metal ceilings; edge grain yellow pine floors; ventilators; W. E. Krumrei, Contr., Bristow. (Lately noted.)

Tex., Dallas.—Board of Education, W. Greiner, Prest.; erect North Dallas High School; 3 stories; fireproof; brick; composition roof; wood and cement floors; vacuum system of heating; \$648,000; Wm. R. Itner, Archt., Board of Education Bldg., St. Louis; American Construction Co., Contr., Houston. (Lately noted.)

Stores.

Fla., South Jacksonville, H. B. Phillips; erect brick business block, Hendricks and Louisa Sts.; 1 story; B. E. Collier, Contr.

Warehouses.

Tex., Dallas.—Southwestern Forwarding Co.; erect \$150,000 warehouse, Harwood St.; 90x534 ft.; reinforced concrete; built-up asphalt roof; monolithic concrete floors; metal doors; wire glass; steel sash and trim; 100,000 sq. ft. floor space; 1,112,000 cu. ft. storage space; 534 ft. trackage on each side of building; motor-driven conveyors and stackers; 90-ft. wharf; F. J. Woerner & Co., Archts., 503 Sumpter Bldg. Address B. G. Howard, Contr., 1301 Broom St. (Lately noted.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Alternators.—Harry Peet, Jr., Bloomfield, Ky.—One 20 K. W., one or two 50 K. W. alternators; prefer 220 volts.

Angle Irons.—S. D. Adelson, Plant City, Fla.—Angle irons for construction of 2 dwellings.

Baler.—I. Buford & Co., 509 N. 15th St., Richmond, Va.—Second-hand Ohio baler, capacity 17x22 in.

Beams (I).—Guyan Machine Shops, B. Shell, Mgr., Logan, W. Va.—12 and 15-in. I-beams, 40 ft. long.

Boiler.—E. N. McGuinn, Gaffney, S. C.—Prices on second-hand 15 or 30 H. P. boiler.

Boiler.—Gulf Machinery & Investment Co., New Orleans, La.—New or second-hand 100 H. P. boiler; if used, state location, prices f. o. b.

Boiler.—John G. Duncan Co., 101 Jackson St., Knoxville, Tenn.—Dealers' prices on 75 H. P. locomotive firebox boiler, good for 100 to 125 lbs. steam pressure; good condition; immediate delivery.

Boilers.—Fred C. Miller, Memphis, Tex.—Prices on boilers for 20-ton ice-making machine.

Bookcases. — S. D. Adelson, Plant City, Fla.—Bookcases for 2 dwellings.

Boxes (Pasteboard).—W. G. Egerton, El Paso, Tex., Gen. Delivery.—Names and addresses mfrs. pasteboard boxes for flour and cereal products, flat and round shapes; quality to carry lithographing.

Brick.—S. D. Adelson, Plant City, Fla.—Pressed brick for 2 dwellings.

Bridge Construction.—Elizabeth City County Supvrs., H. H. Holt, Clk., Hampton, Va.—Bids opened Nov. 30; replace 6 board bridges with reinforced concrete bridges on various roads; plans, etc., with Clk.

Bridge Construction. — El Paso County Commrs., J. A. Escaneda, Auditor, El Paso, Tex.—Bids until Dec. 13; bridge across Rio Grande River; 6 mi. roadway; plans, etc., with County Engr.

Bridge Construction. — City, Frank V. Elisele, Clk., Natchez, Miss.—Bids until Dec. 6; rebuild bridge over Wickland Bayou; plans, etc., on file.

Bridge Construction.—Nacogdoches County Commrs., I. D. Parnley, Clerk, Nacogdoches, Tex.—Bids until Dec. 13; steel bridges; 161-

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

141 lbs. reinforcing steel; 983,667 lbs. structural steel; 68,000 ft. F. B. M. flooring; plans, etc., with Lamar Acker, Engr., Nacogdoches, and State Highway Dept., State Office Bldg., Austin, Tex.

Bridge Construction.—Brevard County Comms., J. F. Mitchell, Clerk, Titusville, Fla. Bids until Dec. 6; changed date from Dec. 9; 8600-ft. trestle bridge; 90,000 cu. yds. dredge fill; pave 28 mi. roads; plans, etc., with C. M. Rogers, Engr., Daytona, Fla.

Bridge Construction.—City of Miami, Fla.—Bids until Jan. 6; changed date from Jan. 8; bridge over Miami River at Ave. G; double-leaf steel bascule span with piers and embankment approaches; clear span 115 ft.; total length of improvement, 495 ft.; 30-ft. roadway; plans, etc., with Chas. W. Murray, City Engr., Miami, and Harrington, Howard & Ash, Conslt. Engrs., Jacksonville, Fla., and 1012 Baltimore Ave., Kansas City, Mo.

Bridge Construction.—Stephens County, E. E. Conlee, Auditor, Breckenridge, Tex.—Bids until Dec. 3; concrete bridge on Crystal Falls road, 2 concrete culverts, concrete bridge on Eastland road and concrete culvert and concrete dip, etc.; plans, etc., with Nagle, Witt, Rollins & Quarles, Engrs., Breckenridge, and Nagle, Witt & Rollins Engineering Co., Engr., Dallas, Tex.

Building Materials.—Arnett Sales Agency, Box 119, Charleston, W. Va.—Prices on building material of all kinds.

Building Material.—W. H. Davis, 315 Healy Bldg., Atlanta, Ga.—Second-hand building material, including lumber; plumbing and heating equipment; bathtubs; low-type radiators; sectional smokeless boiler with about 3500 ft. radiation; good condition; near Atlanta.

Builders' Supplies.—Superior Construction Co., Geo. D. Hawkins, Mgr., South Charleston, W. Va.—Names and addresses mfrs. builders' supplies.

Cars.—Oliver Carter, Mgr. Carter's Production Works, Box 1191, Wilmington, N. C.—5 log cars to run on wood rails.

Cars.—Hastings Co., 600 Seaboard Bank Bldg., West Norfolk, Va.—Prices on several small standard-gauge contractors' dump cars.

Channel (Rubber Tire).—A. I. Root Co., West Side Station, Medina, O.—7-ton solid rubber tire channel, Carnegie section No. 613, in 30, 36, 38½ and 44 in.; quote for prompt shipment.

China Closets.—S. D. Adelson, Plant City, Fla.—China Closets for 2 dwellings.

Coffee Roaster and Equipment.—E. D. Green, Greer, S. C.—Complete equipment for first-class coffee store, including roaster mills, bins, scales, scoops, paper bags, etc.

Colonnades.—S. D. Adelson, Plant City, Fla.—Built-in colonades for 2 dwellings.

Compress (Cotton).—H., care Manufacturers Record, Baltimore, Md.—Prices on cotton compress, with or without boilers, Webb or Morse preferred; state condition, age, location.

Conveyors.—Hastings Co., 600 Seaboard Bank Bldg., West Norfolk, Va.—Data on second-hand belt conveyors, long runs for sand, gravel, etc.

Drainage System.—St. Johns County Commissioners, H. E. Mahr, Chrmn, pro tem. Elkton Drainage Dist. No. 1, St. Augustine, Fla.—Bids until Dec. 14; widen and deepen drainage canal.

Dredging.—Port Comms., S. M. Sparkman, Prest., Tampa, Fla.—Bids until Dec. 9; dredge east side Ybor channel.

Dryroom Equipment.—E. N. McGuinn, Gaffney, S. C.—Prices on laundry dryroom equipment.

Engine.—See Tank (Water), etc.

Engine.—Gulf Machinery & Investment Co., New Orleans, La.—New or second-hand 80 H. P. engine; if used, state location, price f. o. b.

Engine.—Kemp Machinery Co., 215 N. Calvert St., Baltimore, Md.—30 H. P. double-cylinder double-drum Flory hoisting engine; prices f. o. b. cars Baltimore, Md.

Engines.—Harry Peet, Jr., Bloomfield, Ky.—One 25 H. P., one or two 75 H. P. oil engines.

Engines.—John G. Duncan Co., 101 E. Jackson St., Knoxville, Tenn.—Prices on 12, 15, 20 and 25 H. P. stationary engines, side or center crank; second-hand.

Generator.—Oliver Carter, Mgr. Carter's Production Works, Box 1191, Wilmington, N. C.—40 K. W. A. C. 220-volt generator.

Grinder (Knife).—Acme Products Co., De Quincy, La.—New or second-hand knife grinder for grinding hog knives.

Hardware.—S. D. Adelson, Plant City, Fla.—Inside door locks, front-door locks, window latches, lift butts, etc., for two dwellings.

Hardware (Builders').—Raleigh Building Supply Co., Harrison Ave., Raleigh, N. C.—Prices on braces, hinges, rivets for ordinary wood studdards; in quantities.

Heating Plant.—J. E. Shea, Spartanburg, S. C.—Prices on hot-water heating plant for \$20,000 12-room residence.

Hollow Fireproof Tile.—T. G. Cachere, P. O. Box 256, Opelousas, La.—Hollow fireproof tile for theater.

Ice Machinery.—Fred C. Miller, Memphis, Tex.—Prices on ice-making machinery.

Lathes.—See Woodworking Machinery.

Locomotive.—Oliver Carter, Mgr. Carter's Production Works, Box 1191, Wilmington, N. C.—Locomotive to run on wood rails.

Locomotive.—Gulf Machinery & Investment Co., New Orleans.—New or second-hand, 30-ton wood-burning standard-gauge logging locomotive; prefer new; if used, state price, location; immediate delivery.

Locomotives, etc.—Panama Canal, A. L. Flint, Gen. Purchasing Officer, Washington, D. C.—Bids until Dec. 22 to furnish: Electric towing locomotives and parts. Blank forms and information (Circular 1415) on application to offices of: Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

Locomotive.—Landek Lumber Co., Box 703, Tampa, Fla.—Standard-gauge medium-size logging locomotive.

Lumber, etc.—Mississippi River Comsn., First and Second Districts, Custom-house, Memphis, Tenn.—Bids until Dec. 22 to furnish: Southern pine lumber; doors; windows; hardware, etc.; information on application.

Machine Tools.—Guyan Machine Shops, B. Shell, Mgr., Logan, W. Va.—Large back-gear shaper; radial drill, driven with 220-volt 3-phase 60-cycle motor; punch and shear; bending rolls; round steel and shafting, 4 to 16-in. diam.; lathe chucks; 2-jaw for light work.

Merchandise.—G. W. Lewis, Box 74, Alexandria, Va., R. F. D. 4.—Data from large wholesalers of shoes, ladies' coats, remnants, etc.

Metal Ceilings.—T. G. Cachere, P. O. Box 256, Opelousas, La.—Metal ceilings for theater.

Mining Machinery.—Moses Bigelow, V. P. Mutual Lime Co. of Virginia, 154 Nassau St., New York. Mining machinery for 250-ton daily capacity lime plant.

Mining Machinery.—W. F. Ellis, Prest. Caney Fork Collieries, 217 Second National

Bank Bldg., Ashland, Ky.—Mining mchy. for 15-car daily capacity mine.

Mixer (Concrete).—J. S. & D. G. Allen, Newport, Tenn.—Prices on concrete mixer, 7 cu. ft. capacity, mounted on wheels.

Motors.—Fred C. Miller, Memphis, Tex.—Prices on motor power for 20-ton ice machine.

Motors.—E. N. McGuinn, Gaffney, S. C.—Prices on second-hand 7½ to 10 H. P. motors, 1750 revolutions per minute.

Motors.—Guyan Machine Shops, B. Shell, Mgr., Logan, W. Va.—3 to 25 H. P. motors, A. C., 220 volts, 3-phase, 60-cycle; any condition.

Motors.—Oliver Carter, Mgr. Carter's Production Works, Wilmington, N. C.—10 electric motors, 2 to 50 H. P.

Motors.—Planters' Lime & Chemical Corp., 89 Church St., Norfolk, Va.—Alternating current motors, ranging as follows: 50 H. P., 40 H. P., 30 H. P., 20 H. P., 10 H. P. and 5 H. P.

Paint.—Arnett Sales Agency, Box 119, Charleston, W. Va.—Prices on paint for spring delivery.

Paper Weights.—Fay Thompson, V. P. Liberty National Bank, Oklahoma City, Okla.—Names and addresses mfrs. small Liberty statue paper weights; 5000 to 10,000 lots.

Paving.—City of Wichita Falls, Tex.—Bids until Dec. 6; improve Eighth Ave., Ninth Ave., A and Grant Sts.; construct 35,056 sq. yds. pavement; concrete, bitulithic, rock asphalt, sheet asphalt or asphaltic concrete on broken stone or concrete foundation; 17,983 lin. ft. curbs, etc.; plans, etc., with City Engr.

Paving.—Comms. Public Works, Allen Thomas, Clk., Tampa.—Bids until Dec. 7; pave Ashley St. 70 ft. wide with vitrified brick grouted with asphalt and laid on foundation of crushed rock; 5600 sq. yds. pavement; plans, etc., with City Engr.

Paving.—Board of Awards, Baltimore, Md. Bids until Dec. 8; grade streets listed in Contract No. 178, including Chase St. from Loney's lane to 11th St., Loney's lane from Chase to Preston Sts., Preston St. east of Potomac St. to Loney's lane; 28,000 cu. yds. excavation; 5000 cu. yds. embankment; plans, etc., with Conslt. Engr.

Pipe Fittings, etc.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Dec. 13 to furnish: Pipe fittings, sash-operating device, range boilers, valves, brass chain, lumber, memorandum books and paper. Blank forms and information (Circular 1422) on application to offices of Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

Pipe (Water).—T. J. Lane Equipment Co., Springfield, O.—New or second-hand cast-iron water pipe in following dimensions: 36,000 ft. 6-in., 1200 ft. 4-in., 14,000 ft. 12-in.; Class B.

Pipe (Water).—W. A. Leneave, Propr. Crewe Furniture Co., Crewe, Va.—New or second-hand 1000 or 2000 ft. 4-in. B. & S. cast-iron water pipe.

Plaster Board.—T. G. Cachere, P. O. Box 256, Opelousas, La.—Plaster board for theater.

Plumbing.—J. E. Shea, Spartanburg, S. C.—Prices on plumbing complete for \$20,000 12-room residence.

Plumbing.—Treasury Dept., Supervising Archt.'s Office, Washington, D. C.—Bids until Dec. 16; repair and alter plumbing in United States courthouse and postoffice, Covington, Ky.; plans on file or with Custodian at Covington.

(Continued on Page 178.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Barrett Specification Roofs

Bonded for 20 and 10 Years

They are all "from Missouri"—

When it comes to spending their clients' money, architects and construction engineers invariably take the "show me" attitude. Figuratively, they are all "from Missouri."

And the more they insist upon having proof of the durability and economy of the materials which enter into a building, the surer is that building to have a Barrett Specification Roof.

In St. Louis, the hustling metropolis of the Central Mississippi Valley, the "show me" spirit is fully developed; consequently Barrett Specification Roofs cover many of the city's modern buildings.

In a Barrett Specification Bonded Roof the owner not only gets a roof that has proved its superior economy on thousands of buildings all over the country, but he also gets a roof that is bonded for a long term of years against all upkeep expense.

Our Guarantee is a Bond

The Barrett Guarantee is a Surety Company Bond which costs the owner nothing and which absolutely protects him from the expense of roof repairs and maintenance.

This Bond may be obtained on any Barrett Specification Roof of 50 squares or larger, in towns of 25,000 or more, and in many smaller places where our inspection service is available. Our only stipulations are that the roofing contractor shall be approved by us and that The Barrett Specification, revised April 15, 1920, shall be strictly followed.

The Barrett Specification Type "AA" 20-Year Bonded Roof represents the most permanent roof covering it is possible to construct, and while we bond it for 20 years only, we can name many roofs of this type that have been in service over 40 years and are still in good condition.

Where the character of the building does not justify a roof of such extreme length of service, we recommend the Barrett Specification Type "A" Roof bonded for 10 years. Both roofs are built of the same high grade materials, the only difference being in the quantity used.

Full details regarding these Bonded Roofs and copies of The Barrett Specifications sent free on request.

New York	Chicago	The Barrett Company	Philadelphia	
Boston	St. Louis		Cleveland	
Cincinnati	Pittsburgh	Kansas City	Detroit	Nashville
New Orleans	Birmingham	Seattle	Dallas	Duluth
Syracuse	Salt Lake City	Peoria	Atlanta	Youngstown
Milwaukee	Bangor	Johnstown	Lebanon	Elizabeth
Toledo	Columbus	Richmond	Lafayette	Jacksonville
Buffalo	Baltimore	Omaha	Houston	
THE BARRETT COMPANY, Limited				
Montreal	Toronto	Winnipeg	Vancouver	St. John, N. B.
				Halifax, N. S.

(At Left) Barrett Specification 20-Year Bonded Roof on building of Ely & Walker Dry Goods Co., St. Louis, Mo. Arch.: Eames & Young, Roofing Cont.: Columbia Roofing Co. Gen'l Cont.: Jas. Stewart & Co., Inc.

Barrett Specification Roof applied by owners over old pitch, felt and gravel roof on Hotel Factory of International Shoe Company, St. Louis, Mo. Arch.: F. Hume, Roofing Cont.: Swift Roofing Co.

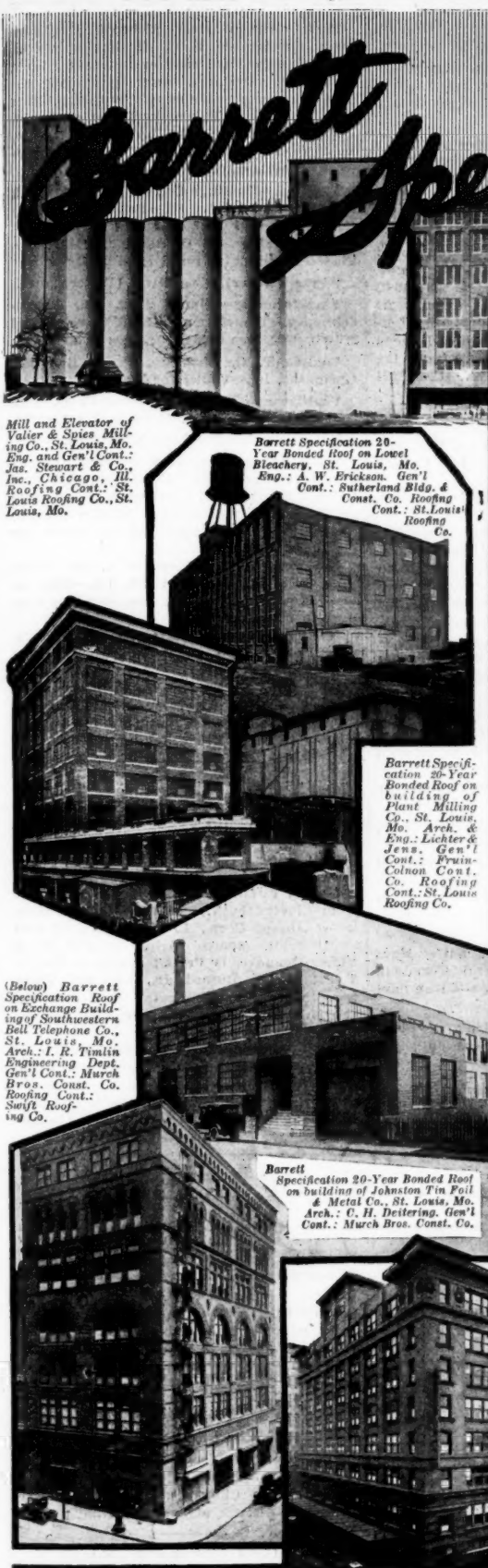
Mill and Elevator of Valier & Spies Milling Co., St. Louis, Mo. Eng. and Gen'l Cont.: Jas. Stewart & Co., Inc., Chicago, Ill. Roofing Cont.: St. Louis Roofing Co., St. Louis, Mo.

Barrett Specification 20-Year Bonded Roof on Lowel Bleachery, St. Louis, Mo. Eng.: A. W. Erickson, Gen'l Cont.: Sutherland Bldg. & Const. Co. Roofing Cont.: St. Louis Roofing Co.

Barrett Specification 20-Year Bonded Roof on building of Plant Milling Co., St. Louis, Mo. Arch. & Eng.: Lichter & Jens, Gen'l Cont.: Frueh-Cohn Co. Roofing Cont.: St. Louis Roofing Co.

(Below) Barrett Specification Roof on Exchange Building of Southwestern Bell Telephone Co., St. Louis, Mo. Arch.: I. E. Timlin Engineering Dept. Gen'l Cont.: Murch Bros. Const. Co. Roofing Cont.: Swift Roofing Co.

Barrett Specification 20-Year Bonded Roof on building of Johnston Tin Foil & Metal Co., St. Louis, Mo. Arch.: P. H. Deister, Gen'l Cont.: Murch Bros. Const. Co.



Pump.—See Tank (Water), etc.

Pump.—Guyan Machine Shops, B. Shell, Mgr., Logan, W. Va.—Vertical centrifugal pump, direct connected to 2300-volt 3-phase 60-cycle motor, to deliver 350 to 650 gals. per minute through 8-in. line, with 14 quarter bends to reservoir 1 mi. distance, 230 ft. above pump, which is 10-ft. above water; motor 15 ft. above pump.

Rails.—Landeck Lumber Co., Box 703, Tampa, Fla.—2 mi. 20 to 30-lb. relay rails.

Regulators (Steam Plant).—Floyd Short & Partners, Inc., Floyd T. Short, Prest., 30 N. Michigan Ave., Chicago, Ill.—Names and addresses mfrs. regulators for steam plants.

Road Construction.—Blenville Parish Police Jury, J. S. Williams, Secy., Arcadia, La. Bids until Dec. 20; roads; George R. Wilson, Engr.

Road Construction.—Marion County Commissioners, O. H. Rogers, Chrmn., Ocala, Fla. Bids until Dec. 7; 4400 ft. road from Levy County line; crushed lime rock, 10 ft. wide and 8 in. deep; concrete bridge on Dunnellon-Inglis road.

Road Construction.—Childress County Commrs., M. J. Hathaway, Judge, Childress, Tex.—Bids until Dec. 13; roads; plans, etc., with County Clk.; Hess & Skinner, Engrs., Dallas, and State Highway Dept., Capitol Bldg., Austin, Tex.

Road Construction.—Duval County Commissioners, Frank Brown, Clk., Jacksonville, Fla.—Bids until Dec. 10; spread 3 applications of oil on shell portion of Atlantic Beach boulevard and part of St. Augustine road; 65,000 sq. yds.; specifications, etc., with Clk., Room 101 Courthouse Bldg.

Road Construction.—Coweta County Commissioners Roads and Revenues, T. G. Farmer, Jr., Clerk, Newnan, Ga.—Bids until Dec. 1; topsoil Newnan and Roscoe road.

Road Construction.—State Highway Commission, Montgomery, Ala.—Bids until Dec. 21; 18.88 mi. Guntersville and Boaz road; steel bridge; plans, etc., on file at Montgomery with Probate Judge, Guntersville, Ala., and State Highway Dept., Decatur, Ala.

Road Construction.—Hemphill County Commrs., Canadian, Tex.—Bids until Dec. 13; sand-clay road to Lipscomb County line; plans, etc., with County Clk., Canadian, and Hess & Skinner, Engrs., Dallas, Tex.

Road Construction.—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids until Dec. 20; 13 mi. Covington-Sliddell highway, Section D; information on file; Duncan Buie, State Highway Engr., New Orleans.

Road Construction.—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids until Dec. 20; 17.37 mi. Arcadia-Shreveport highway and Arcadia-Ruston highway; information on file.

Road Construction.—Brevard County Commissioners, J. F. Mitchell, Clerk, Titusville, Fla.—Bids until Dec. 6; changed date from Dec. 9; roads and bridges in Cocoa Beach Special Road and Bridge Dist.; clear, grub, grade and pave 28 mi. roads; construct 8600-ft. trestle bridge; plans, etc., with C. M. Rogers, Engr., Daytona, Fla.

Road Construction.—Pender County Commissioners, J. E. Henry, Chrmn., Burgaw, N. C.—Will invite bids; 10 mi. sand-clay road from Long Creek to Harrell's store, and 20 mi. sand-clay road from Still Bluff to Kelly's Grove.

Road Construction.—El Paso County Commissioners, J. A. Escudado, Auditor, El Paso, Tex.—Bids until Dec. 13; grade and gravel 6 mi. roadway; build bridge; plans, etc., with County Engr.

Road Construction.—Tate County Supvrs., M. H. Thompson, Clk., Senatobia, Miss.—Bids

until Dec. 6; work public roads of Fourth Supvrs. Dist.; plans, etc., with Chancery Clk.

Road Construction.—Jasper County Commissioners, C. C. Brown, Judge, Jasper, Tex. Bids until Nov. 30; section of Highway No. 8; C. P. Hunter, County Engr.

Road Construction.—Highway Dept., Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids until Dec. 20; 15.86 mi. Tallulah-St. Joseph highway, Sections A and B; information on file; Duncan Buie, State Highway Engr., New Orleans, La.

Road Construction.—Highway Dept., Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids until Dec. 20; 10.05 mi. Rayville-Monroe highway, Sections A1 and A2; 13.26 mi. Rayville-Winnsboro highway, Section C; information on file; Duncan Buie, State Highway Engr., New Orleans, La. **Sizer.**—Box 583, Charlotte, N. C.—16x24 timber sizer.

Road Construction.—Lamb County Commissioners, R. C. Hopping, Judge, Olton, Tex.—Bids until Nov. 20; 26.06 mi. Highway No. 7; C. L. Hasle Engineering Co., County Engr.

Roadway Construction.—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids until Dec. 20; 3.75 mi. Shreveport-Arkansas highway, Section A; 5.75 mi. Shreveport-Mansfield highway, Section B; information on file; Duncan Buie, State Highway Engr., New Orleans, La.

Rolls (Bending).—Maddox Foundry & Machine Co., H. Maddox, Prest.-Mgr., Archer, Fla.—Second-hand set power bending rolls, 72-in. capacity, ½-in. thick material, pyramid type.

Roofing.—Arnett Sales Agency, Box 119, Charleston, W. Va.—Prices on roofing.

Sawmill.—Gulf Machinery & Investment Co., New Orleans, La.—Prices on new or second-hand sawmill complete, 25,000 ft. daily capacity; immediate delivery.

Sewer Construction.—City of Wichita Falls, Tex., George W. Thornburn, Clerk.—Bids until Nov. 29; construct storm sewers; vitrified clay pipe, etc.; 55 inlets; 5 manholes; 62 yds. concrete; 1320 sq. yds. paving replacement; 145 yds. riprap; 160 ft. piling; plans with J. Montgomery, City Engr.

Scale.—A. R. Ulbrich, Gen. Sales Mgr., Terry Mfg. Co., Grand Central Terminal, New York.—10-ton track scale, wide or narrow gauge.

Shovel.—T. J. Pratt, 302 Bank of Commerce Bldg., Norfolk, Va.—Prices on small caterpillar steam shovel, ¾-yd. dipper; description and location.

Silica Grinders.—W. B. Davidson, 5 S. Perry St., Montgomery, Ala.—Names and addresses of grinders of silica.

Tank (Water), etc.—Alsbrook Hardware Store, Greeleyville, S. C.—Dealers' prices on 1000-gal. galvanized steel or iron water tank, with 20-ft. galvanized tower; pump and engine to operate water supply to tank; Fuller and Johnson or Fairbanks-Morse preferred.

Textiles.—H. W. Kimball, Box 347, Seattle, Wash.—To represent mfrs. of hosiery, underwear, ginghams, etc.

Ties, etc.—Hastings Co., 600 Seaboard Bank Bldg., West Norfolk, Va.—Prices on railway ties, etc.

Tile Thimbles.—S. D. Adelson, Plant City, Fla.—Tile thimbles for 2 dwellings.

Tower (Water).—See Tank (Water), etc.

Transformers.—Harry Peet, Jr., Bloomfield, Ky.—Transformers, 220-6600 volts and 220-110-2200, also 6800-2200; sizes to 15 K.V.A.

Vaults.—T. G. Chachere, P. O. Box 256, Opelousas, La.—Vaults for theater.

Ventilators.—T. G. Chachere, P. O. Box 256, Opelousas, La.—Ventilators for theater.

Wire.—See Wireworking Machinery.

Wires (Copper).—Port of New Orleans Commrs., W. O. Hudson, Prest., 200 New Orleans Court Bldg., New Orleans, La.—Bids until Dec. 14 to furnish: Rubber-covered, weatherproof and bare copper wires for coal-handling plant.

Wireworking Machinery.—A. D. Lindy, 2122 Cadiz St., New Orleans, La.—Data on mch. to mfr. wire suit hangers; also wire used in manufacture.

Woodworking Machinery.—E. A. Fonda, Greenville, S. C.—Light novelty woodworking machinery, lathes, etc.

Wrappers (Paraffin).—W. G. Egerton, El Paso, Tex., Gen. Delivery.—Names and addresses mfrs. paraffin wrappers for bakers; quality to carry lithographing.

Railroad Construction

Railways.

Va., Roanoke.—Roanoke & Botetourt Railroad Co., recently chartered, will build line from Cloverdale, Va., to mines of the Oriskany Mining Corp., 12 mi., including four small bridge spans. A. P. Staples, Terry Bldg., Roanoke, is Prest.; James C. Martin, V.-P.; Paul C. Buford, Jr., Secy. and Treas. Line to connect with Norfolk & Western Ry. at Cloverdale. Date for construction bids not fixed.

Ala., Verbena.—Dixie Construction Co. of Birmingham is reported surveying for a railroad from a connection with the Louisville & Nashville Railroad to the new dam site at Duncan's Riffle on the Coosa River, the Alabama Power Co. supervising the work.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Now In Large New Factory.

The Diagraph Stencil Machine Corporation of St. Louis has occupied their new factory at 1600 South Kingshighway. Twenty years ago they occupied a small two-story building, which was succeeded by one of much larger capacity, and that now is followed by one main building 100x300 ft. and two stories high, with additional buildings for shipping and receiving at the address mentioned. The location and environment are ideal. The diagraph machine cuts paper stencils for marking freight for shipment, making a legible address which may not be torn loose.

One of the features is an interchangeable letter, which permits substitution of one size of stencil for another. It is said that the company has 20,000 customers using the machine. T. W. Remmers is president of this company.

Wooden Stave Pipe Lines.

The American Wood Pipe Co. of Tacoma, Wash., have opened a branch office at 140 S. Dearborn St., Chicago, Ill., with Anton J. Berger as district manager, so that any ju-

(Continued on Page 180.)

The Standard Motor Truck is Mr. Albert Fisher's Contribution to Transportation

In a retrospection over the advancement in business during the past decade, it is not easy to bring to mind any agent that has contributed more to quicken agricultural, industrial, and commercial activity and to increase the prosperity of every community than the motor truck.

Yet, in a reminiscence over the achievements that have signalized the commencement of record-making events in motor truck transportation during the past ten years, it is difficult to find anything that has been more notable and commanding than the profound influence created by the Standard Trucks developed and built by Mr. Albert Fisher.

And, it will be remembered that, in the Standard Motor Truck, Mr. Fisher gave transportation its first practical, endurable, and reliable motor truck through the standardization and the interchangeability of quality parts.

From his twenty long years of experience in building carriages and wagons Mr. Fisher was convinced that a motor truck built wholly of standard parts, properly designed and properly put together, was the coming vehicle. It was with this idea that he developed the Standard Motor Truck Company.

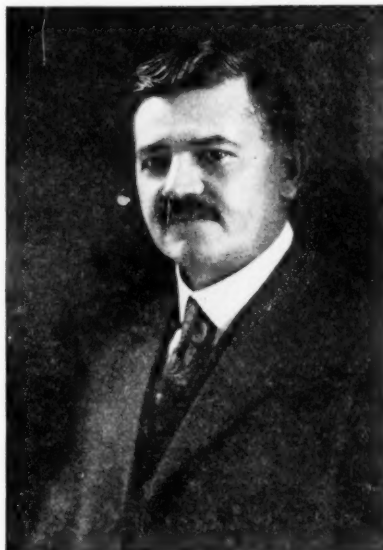
Into the Standard Motor Truck Mr. Fisher puts only standardized parts. Each part must be accepted generally as the standard in its field before he adopts it. As a result, each part is made by specialists whose products have set the standards by which others in the automotive field are compared. This insures uniform excellence in all

Standard Trucks from the very source to the final disposition of power.

The advantages, to be derived by users, of using Standard parts throughout are, Mr. Fisher believes, that a standard part is simple—that it can be easily taken off or put on—that trucks can be serviced more quickly because the parts are interchangeable—and that the knowledge of how to take care of a standard part is widespread. This results in repairs be-

ing speeded up, lay-ups reduced, and time and money saved to owners.

Naturally, by being built to these ideals, Standard trucks were bound to be set out as trucks that are practical, reliable, efficient, and endurable. This, no doubt, is the reason why thousands of Standard users, in every kind of business, have found the truck so serviceable that they say the Standard is "All The Name Implies."



STANDARD MOTOR TRUCK COMPANY, Detroit, Michigan

Standard
TRADE MARK
DETROIT
U.S.A.

formation concerning their products can be obtained without writing to the Pacific Coast. The company makes wire-wound wood pipe for irrigation and water supply systems, also tin and asbestos lined cedar casing for insulating underground steam mains. This pipe is known as continuous stave pipe. Special products are valves, hydrants, crosses, tees, etc. An illustrated folder which describes the products of this company also presents an excellent picture of the factory at Tacoma. Methods of manufacturing the pipe are described in detail. It is noted that many towns and cities in the Northwest secure their water supplies through stave pipe lines, and that Tacoma has more than 100 miles of them in use and is adding to this total.

Refrigeration and Cold Storage.

Installations recently reported by the Dixie Engineering & Insulating Co., refrigerating engineers, Atlanta, Ga., include the following: Piedmont Market, L. O. Price, proprietor, Athens, Ga., a four-cylinder Norwalk refrigerating machine; Howell & Gibbs, Tifton, Ga., a four-cylinder Norwalk machine and a cold-storage room, which is insulated with Rock cork and connected up with the machine; Bayou Fish Co., Valparaiso, Fla., a two-cylinder 6x6 Norwalk compressor and two cold-storage rooms; which are insulated with Rock cork and have Victor doors; Sias Sanitary Ice Cream Co., Bradentown, Fla., a four-cylinder Norwalk refrigerating machine and an ice-cream hardening and milk-storage room, the latter to be insulated with the same kind of cork material as previously mentioned; Greensboro Ice Co., Greensboro, Ga., ice-storage rooms similarly insulated.

Now In Their New Building.

The Southern Textile Machinery Co. of Greenville, S. C., recently moved into their new building on Jackson St. They outgrew their old quarters and erected this fine building, 58x108 feet, for their special use, and it affords sufficient space to carry their full line of textile machinery and electric motors; the motors in sizes from 50 horse-power to 1/20 of a horse-power. The shipping department adjoins a railroad siding, making transportation facilities very convenient.

Book Reviews.

Export Register of the Federation of British Industries. Published for the Federation by the Industrial Publicity Service, Ltd., Red Lion Court, Fleet St., London. 1920.

The expansion of British industry and manufactures during late years is presented comprehensively in this fine volume of more than 600 pages, including a number of advertisements, many of them being as informing as the letter-press of the book. The Federation of British Industries was founded during the war, and its organization is designed to benefit purchasers and consumers of British goods throughout the world. The book is an epitome of manufactures in Great Britain, and it has been thoroughly and carefully prepared. All lines are represented in its contents, and names and addresses are given in abundance. Besides being published in English, there are also editions in several foreign languages. The press work and binding are superior and attractive.

New Collection Methods. By Edward Hall Gardner, A.M. New York: The Ronald Press Co. (Second printing.)

This manual is one that has been much appreciated for great practical value, taking up as it does and dealing at length with the

actual credit and collection methods of many successful establishments. It specifically points out lines of effective procedure for successful work and describes definite methods of collection for the manufacturer, the jobber and the retailer, including mail-order and installment houses. Collection letter writing is also treated in a broad and helpful manner. The work is appropriately described as a systematic treatment of the place of collections in marketing, including constructive credits, psychology of collections, procedure and system for collection departments, and the principle of resale. Its aim is to show the best way to make collections and the principle underlying them. The author in the preface says that the book has been written chiefly "on the ground," and, in consequence, owes much at every point to the business men who have generously given from their experience. It contains more than 200 complete letters selected from among many thousands, and there are also extracts from others.

American Jewish Year Book, 5681 (September 13, 1920, to October 2, 1921). Edited by Harry Schneiderman for the American Jewish Committee. Philadelphia: The Jewish Publication Society of America, 1920.

Besides presenting the Jewish calendar, the contents of this book comprise a host of facts of interest to the Jewish people, many of which are also of interest to people of other races and religions. The preface gives some idea of the generally interesting nature of the volume, noting, among other things, an article on the Jews of Alsace-Lorraine, 1870-1920, and describing their happiness upon being restored as part of the French population; also a particularly impressive contribution about the Jews called Falashas living in Abyssinia. These people have skins "of a light black color, and the regular and finely-cut features which characterize them speak of a non-African race." They call themselves Beta Israel (the House of Israel) and state that they are the offspring of the stock of Abraham, Isaac and Jacob. Their oral traditions sustain their claim as Jews. The salutary observances prescribed by the Bible preserved them from contagious diseases. These peculiar people live to themselves, rigorously separated from the rest of the population, and never do they permit non-Jews to enter their dwellings. This chapter is especially entertaining and instructive, but the rest of the book is none the less impressive and valuable. The Jewish population of the world is given as 15,744,662, of whom 3,379,668 are in North America, 3,300,000 being in the United States, including 1,500,000 in New York city.

Industrial Oil Engineering. By John Rome Battle, B.Sc. in M.E.; M.E. Philadelphia and London: J. B. Lippincott Company.

This valuable reference book is a comprehensive manual of data relating to lubrication and industrial oils, including tables, general oil information, engineering and industrial requirements, and will be fully appreciated by oil engineers, lubricating engineers, oil salesmen, oil-equipment manufacturers, mechanical engineers, machinery designers, mill and power-plant superintendents, and others interested in efficiently utilizing oil products and equipment, as well as in the conservation of power. The lubricating engineers handbook has been revised and is included in the volume, which, although of more than 1100 pages, is not bulky, but convenient, and, moreover, it is furnished with a thumb index. Special pages are inserted between each of the sections on industrial practice, so that users of the book can write thereon prices, results of tests and other facts that they may wish to

preserve handily. The binding is flexible, and the size is such that the volume can be readily carried in a traveling bag. There are many illustrations.

Atlas Handbook on Concrete Construction. New York: The Atlas Portland Cement Co. 1920.

This valuable book of 150 pages provides in convenient form practical information about concrete, either plain or reinforced, presented in such a manner as to be suitable for the average builder in this line. The publishers say that, realizing the impossibility of giving in a book of this size detailed information about building many different structures, they have covered in considerable detail the subjects of concrete, reinforced concrete and forms in the first three chapters, and that builders will be able to adapt this information to any particular work they may have to do. Furthermore, the company's technical department will give additional information upon request, as its corps of experienced engineers are maintained to co-operate with builders in concrete. There are many illustrations and diagrams to supplement the text. The book is small and can be handily carried in the pocket.

The Open Hearth: Its Relation to the Steel Industry: Its Design and Operation. Cleveland, Ohio: The Wellman-Seaver-Morgan Company. 1920.

This splendidly prepared volume of 378 large pages opens with a dedication—accompanied by a likeness—to Samuel T. Wellman, who is referred to as "the father of the open hearth in America and founder of the Wellman-Seaver-Morgan Company, who gave many years of constructive effort to the invention, design and improvement of open-hearth furnaces and steel plates." The introduction says that the purpose of the book is to assemble in one volume authentic engineering data relative to the design, construction and operation of open-hearth furnaces, and the machinery and accessories used in connection with them, and it is stated that the late Mr. Wellman built the first commercially successful open-hearth steel melting furnace in this country. It was put into operation in 1870. The book gives a history of steel making and explains the different methods employed, this being followed by a history of the open-hearth furnace and the open-hearth process of steel manufacture. These chapters are followed by others describing the advantages of open-hearth steel, the operation and performance of the open-hearth furnace, etc. Illustrations are liberally distributed throughout the book, and there are also very many reproductions of blueprints displaying details. The pictorial views show interiors and exteriors of plants, and are unusually interesting. The volume will be heartily appreciated by everyone interested in steel production.

Financial News

New Financial Corporations.

Ala., Selma.—City Savings Bank. Incpd.; capital \$100,000; H. C. Armstrong, Pres.; H. I. Shelley, V.-P.; B. H. Perrin, Cashr.

Fla., West Palm Beach.—Palm Beach Savings and Loan Assn. organized; capital \$250,000.

Ky., Allen.—Floyd County Bank incpd., capital \$25,000; Melone Hall, W. K. Allen, Henry Porter.

(Continued on Page 182.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

If You Want Efficiency Install a Lunch Room



Installation of Robert Gair Company, Brooklyn, N. Y.

Look for the
"Raised-Rim"

—healthier workers

—less labor turnover

—buy permanent equipment

A COLD lunch, carried in a dinner pail or lunch box, becomes uninviting by lunch time. A hot meal at noon produces energy and promotes efficiency and industrial contentment. You can serve a hot meal in your plant at a minimum cost by installing a **Sani** lunch room.

The U.S. Department of labor estimates that it costs \$500.00 to train the average employee for permanency. Why not save this money? A **Sani** lunch room in your plant will reduce the labor turnover and your employees will not want to move from one plant to another.

Sani-Onyx table tops are *radiantly-white*, durable, easy to clean and as hard and smooth as polished glass. The "Raised-Rim" (our exclusive patent) prevents chipping and dripping. **Sani-Metal** table bases are made of fine-grained cast iron, heavily coated with porcelain enamel. No projections or crevices for dirt to collect.

Write In Today

We will send you our latest catalogue showing all kinds of **Sani** food and drink equipment. This beautiful book contains valuable information and many illustrations. Send us your floor plan and our engineering department will lay out your space free of charge.

These materials may be purchased from local distributors. Our export department completely equipped to handle foreign business.

Sani Products Co.

678 Sani Building

Chicago, Ill.

Md., Baltimore.—Mercantile Securities Co. inceptd.; 443 Calvert Bldg.; capital \$15,000; Jos. Steinberg, Louis Welfeld, Ben Brown.

Md., Baltimore.—Polish-American Fire Insurance Co. inceptd.; 1706 Eastern Ave.; capital \$200,000; Michael L. Stefanski, Casimir M. Zacharski, Peter M. Slewierski.

Md., Baltimore.—Lafayette Bank inceptd.; Lexington and Calvert Sts.; capital \$200,000; surplus \$40,000; J. Shorb Neil, Andrew K. Addison, E. Edgar Thompson, W. T. Haydon. (Supersedes recent item.)

Miss., Meridian.—Meridian Finance Corp. inceptd.; capital \$100,000; E. S. Bostick, R. E. Wilbourn, A. D. Simpson.

Mo., St. Louis.—Liberty Central Trust Co. of St. Louis organized; consolidation of Liberty Bank and Central National Bank; capital, surplus and undivided profits between \$4,000,000 and \$5,000,000. (Supersedes recent item.)

Mo., St. Louis.—First National Bank; purchased Mortgage Trust Co. and Mortgage Guarantee Co. with assets of \$1,800,000; capital of First National Bank \$15,000,000; resources \$170,000,000.

Okla., Anadarko.—American National Bank of Anadarko chartered; capital \$50,000; B. B. Popejoy.

Okla., Boswell.—First State Bank inceptd.; capital \$25,000; R. D. Wilbun, C. G. Shull; both Hugo; S. C. Boswell, Durant, Okla.

Okla., Tulsa.—Security Royalties Co. inceptd.; capital \$10,000; P. Rumsisel, M. H. Dolliver, S. Steinhorst.

Tex., Bangs.—First National Bank of Bangs chartered; capital \$25,000; W. P. Fads, Prest.; Albert R. Moore, Cashr.

Tex., Eastland.—Securities State Bank & Trust Co. chartered; capital \$150,000; Sam D. Young, Prest.; Dixon G. Hunt, Jr., Cashr.

Tex., Quinlan.—First National Bank of Quinlan chartered; capital \$25,000.

Tex., San Antonio.—Security State Bank & Trust Co. chartered; capital \$100,000; A. L. C. Magruder, Prest.; Louis Hillje, Cashr.

Va., Bristol.—Union Trust Bank organized; capital \$500,000; S. H. Thompson, Prest.; J. H. Faucette, V.-P.; C. P. Daniel, Secy.-Treas. (Supersedes recent item.)

Va., Roanoke.—Colonial National Bank organized; consolidation of Colonial Bank of Roanoke and Liberty National Bank; capital \$600,000.

New Securities.

Ala., Albany.—School and City Hall.—City, E. C. Payne, Mayor; vote on \$200,000 bonds; proposed.

Fla., Bartow.—Road and Bridge.—Polk County Special Road and Bridge Dist. No. 4, J. A. Johnson, Clk.; bids until Dec. 7; \$100,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Jan. 1.

Fla., Daytona.—City Commrs.; bids until Dec. 8; \$450,000 of 5 per cent semi-annual 19-year city bonds.

Fla., Green Cove Springs.—Drainage.—Clay County, Walkill Drainage Dist.; bids about January; \$100,000 of 6 per cent 10-29-year bonds.

Fla., Pensacola.—School.—Escambia County Board of Instruction, A. S. Edwards, Supt.; issued \$500,000 of Special Tax School Dist. No. 16; 6 per cent \$1000 denomination, dated Jan. 1.

Fla., Titusville.—School.—Brevard County Board of Instruction; vote Dec. 18 on \$40,000 of Special Sub-Tax School Dist. No. 3 bonds.

Fla., Vero.—Electric.—City; sold \$30,000 of 6 per cent semi-annual \$1000 denomination

bonds, dated Mar. 1, to Farmers' Bank of Vero.

Fla., West Palm Beach.—Street, Sewer, City Hall, Jail.—City Commrs.; sold \$250,000 of bonds to Bessemer Investment Co., New York, at \$247,010 and accrued interest.

Fla., West Palm Beach.—School.—Palm Beach County Board of Instruction, W. J. Dyer, Chrmn.; sold \$40,000 bonds of School District No. 4 to Elston & Co., Chicago, at 96%. (Supersedes recent item.)

Ga., Bainbridge.—Fowlstown Consolidated School Dist., H. W. Bussey, Secy., Fowlstown, Ga.; issued \$15,000 of 6 per cent \$1000 denomination 20 yr. bonds, dated Oct. 1. (Supersedes recent item.)

Ga., Dublin.—Bridge, Culvert, Water, Sewer and School.—City, A. H. Grier, Clk.; bids until Dec. 6; \$55,000 of 5 per cent semi-annual \$1000 denomination 24-yr. bonds, dated Jan. 1. (Supersedes recent item.)

Ga., Rome.—School.—City, Isaac May, Chrmn.; bids until Jan. 6; changed date from Nov. 18; \$100,000 of 5 per cent denomination bonds, dated Oct. 1, due \$5000 ten years after date, \$5000 each successive year.

Ga., Savannah.—School.—Board of Education; vote Jan. 18 on \$1,500,000 of 4½ per cent semi-annual \$1000 denomination bonds, dated May 1.

Ky., Walton.—Electric.—City; issued \$10,000 bonds. Address The Mayor.

La., Cameron.—Road.—Cameron Parish Road Dist. No. 1; sold \$10,000 of 5 per cent bonds, \$1000 denomination, dated Aug. 1, to W. T. Burton and \$4000 bonds to J. J. Koonce.

La., Natchitoches.—School.—Town; voted \$160,000 bonds. Address The Mayor.

La., Welsh.—Drainage.—Welsh Drainage Dist. No. 1; sold \$130,000 of 5 per cent semi-annual \$500 denomination 19-year bonds, dated June 1, to G. B. Zigler & Co., Jennings, La., at par.

Md., Hagerstown.—Sewer.—City; vote in March on \$140,000 bonds; J. B. Ferguson, City Surveyor.

Miss., Brookhaven.—Playground and School, City, Chester Byrne, Clerk; sold \$15,000 of 6 per cent bonds to T. H. and C. B. Perkins at par. (Lately noted inviting bids.)

Miss., Ellisville.—School.—Jones County Board of Education; vote on \$3500 bonds of Oak Grove Consolidated School Dist.

Miss., Fulton.—Road.—Itawamba County Commrs.; voted \$240,000 bonds.

Miss., Hattiesburg.—School.—City, T. E. Batson, Mayor; voted \$365,000 bonds. (Lately noted to vote.)

Miss., Meridian.—Ice Plant and Hospital.—City, E. J. Gallagher, Chrmn. Comen.; voted \$170,000 bonds as follows: \$150,000 ice-plant and \$20,000 hospital bonds. (Lately noted to vote.)

Miss., Starkville.—Sewer and Water.—City; sold \$40,000 of 5½ per cent semi-annual \$500 denomination bonds, dated Nov. 1, due yearly, \$2500, 1921 to 1930, inclusive, and \$3000, 1931 to 1935, inclusive. Address The Mayor.

Mo., Blairtown.—Electric.—City; vote on bonds. Address The Mayor.

Mo., Cape Girardeau.—School.—City; vote Nov. 30 on \$54,000 bonds. Address The Mayor.

Mo., Jackson.—School.—Cape Girardeau School Dist.; vote on \$54,000 bonds; proposed.

N. C., Burlington.—Street and Water.—City, M. W. McPherson, Clk.; sold \$25,000 of 6 per cent \$500 denomination water bonds, due yearly on Sept. 1, as follows: \$500, 1921 to 1930, inclusive; \$22,000 of 6 per cent semi-annual \$1000 denomination street bonds, dated Sept. 1, to First National Trust Co., Durham, N. C. (Lately noted inviting bids.)

N. C., Charlotte.—School.—City, C. M. Creswell, Clk.; issue \$750,000 bonds.

N. C., Charlotte.—School.—City, C. M. Creswell, Clk.; sold \$100,000 of 5½ per cent bonds, dated Nov. 1, due yearly, \$2000, 1923-1930, inclusive, and \$5000, 1937 to 1948, inclusive, to Wm. R. Compton Co., St. Louis. (Lately noted inviting bids.)

N. C., Dobson.—Road and Bridge.—Surry County Commrs., Henry Wolfe, Clk.; bids until Dec. 6; \$100,000 of 6 per cent semi-annual bonds, as follows: \$75,000 of \$1000 denomination road and \$25,000 bridge bonds. (Lately noted.)

N. C., Greensboro.—School.—City Commrs., Board of Education; vote Jan. 18 on \$1,000,000 bonds.

N. C., Kinston.—Water and Electric.—City; vote next year on \$300,000 bonds. Address The Mayor.

N. C., Louisburg.—School.—Franklin County, Cedar Rock Township, J. P. Timberlake, Chrmn.; vote Dec. 7 on \$20,000 bonds.

N. C., Monroe.—School.—City, School Board, W. B. Love, Chrmn.; vote Dec. 14 on \$200,000 bonds.

N. C., Smithfield.—Water, Sewer and Market-house.—Town, W. L. Fuller, Clk.; bids until Dec. 29; \$60,000 of 6 per cent \$1000 denomination bonds, dated Dec. 1.

N. C., Wentworth.—Road and Bridge.—Rockingham County Commrs., Hunter K. Penn, Clk.; sold \$200,000 of 6 per cent semi-annual \$1000 denomination bonds to Geo. B. Craven, Lancaster, S. C., at \$201,000. (Lately noted inviting bids.)

Okla., Okmulgee.—Library.—City, R. H. Jenness, Clk.; voted \$50,000 bonds.

Okla., Sallisaw.—Bridge.—Sequoyah County Commrs.; vote in January on \$100,000 bonds.

Okla., Tulsa.—Water.—City; vote on \$5,000,000 bonds; Holway Eng. Co., Engr., 250 Lynch Bldg. (Supersedes recent item.)

S. C., Andrews.—School.—Town; voted \$57,000 bonds. Address The Mayor.

S. C., Greenville.—School.—Greenville County Board of Education, Greenville, S. C., and Spartanburg County Board of Education, Spartanburg, S. C.; vote in November on \$50,000 bonds.

S. C., Greenwood.—Road.—City, A. M. D. Singleton, Treas.; bids until Dec. 15; \$200,000 of 6 per cent bonds.

S. C., Seneca.—Sewer and Water.—Town, W. F. Austin, Chrmn.; vote Dec. 15 on \$160,000 of 6 per cent bonds. (Supersedes recent item.)

S. C., Spartanburg.—Street, Sewer and Park, City, T. J. Boyd, Clk.; invite new bids on \$200,000 of 5 per cent \$1000 denomination 20-year bonds; rejected previous bids.

Tenn., Dresden.—Road.—Weakley County Commrs., G. E. Bowden, Chrmn., Martin, Tenn.; sold \$125,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Oct. 1, to Taylor, Ewart & Co. (Lately noted inviting bids.)

Tex., Austin.—School.—State Board of Education; purchased \$240,000 bonds.

Tex., Canyon.—Street.—City, J. D. Gamble, Mayor; bids until March 1; \$20,000 of 5 per cent \$1000 denomination 40-20-year bonds, dated March 1. (Lately noted voting.)

Tex., Cisco.—School and Park.—City; voted \$60,000 of 5 per cent 40-year bonds. Address The Mayor.

Tex., Dickens.—School.—Dickens County Common School Dist. No. 16; registered \$1800 of 20-yr. bonds, dated Nov. 8.

Tex., Eastland.—Sewer and Water.—City, W. Lander, Mgr.; bids until Dec. 4; \$150,000 water.

(Continued on Page 186.)

Depress the Keys— Turn the Crank— Then Read the Answer

THAT'S all there is even to intricate figuring when you use the Monroe.

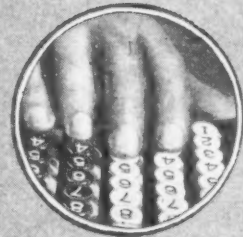
Whether it's invoices, payrolls or estimates; square root, interest, discounts and pro-rating, it's simply a case of depress the keys—turn the crank—read your answer and the proof. And it's done without requiring reciprocals or compliments—without depending on trained operators.

The Monroe makes all figuring as easy as turning a crank. To multiply or add, turn the Monroe crank forward. To divide or subtract, turn the crank backward, and—

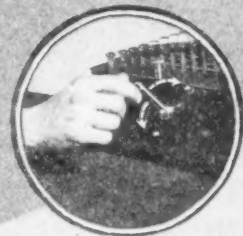
There in the one set of dials—is your answer. Correct, you're sure of it. On the Monroe keyboard and in the dials you have a positive check on the accuracy of every step in your problem.

Speed—accuracy—ease of operation—the Monroe takes first place on all three counts. Test the Monroe yourself. Compare it with others. Then decide. For full information, mail coupon for "Monroe Book of Facts."

The Monroe makes all figuring as easy as turning a crank.



Depress the Keys



Turn the Crank



Then read the Answer and the proof

MONROE

REG. U. S. PAT. OFF.

CALCULATING MACHINE

The "SHOW ME" Coupon-Mail it today
Monroe Calculating Machine Co., Woodworth Bldg., N.Y.
Without obligation (check items desired):
☐ Send us a copy of "Monroe Book of Facts."
My Name.....
Bank Name.....
Address.....
M. R. 12-229

New Production in Texas Oil Fields.

Austin, Tex., November 26—[Special.]—The Hull field now occupies second place in the daily production of the crude-oil fields of the Gulf Coast region, giving additional proof that only at the expense of much time and money is the potentiality of a given area established. It usually takes a long time to develop an oil field. The only exception to this rule was that of Spindle Top, which came into being within a few weeks after the wonderful Lucas gusher was brought in, about 20 years ago. Spectacular wildcat strikes are seldom made. Usually an oil field in Texas has its beginning in a modest and uncertain way. This was true as to all of the light crude fields of North Central Texas. The successes at Burkburnett came only after many wells had been drilled, and the prospecting covered a period of several years—not in the exact locality where the big production was afterward obtained, but close by. The Hull, West Columbia and some of the other coast fields have passed through similar periods of disappointment and uncertainty. Their productiveness is now proved. It is stated that the chief cause of slowness in developing an oil field is that it takes time for an understanding of the strata to be reached. The early wells are often failures because of lack of proper drilling. Perhaps they may have lacked in depth or in some other way failed to tap the pool that was brought to light by later wells. During the last two or three years several companies have been active in drilling operations at Hull. Several good wells were brought in, but difficulties were encountered that held down the production. With the solving of the drilling problems there the production has suddenly mounted to more than 25,000 barrels a day, increasing 14,000 barrels in seven days. The latest producers are those of the Humble Oil & Refining Co., with a flow of 3500 barrels of pipe-line oil in a day; the Republic Production Co., 1800 barrels a day; Empire Gas & Fuel Co., 500 barrels a day, and the Monarch Oil & Refining Co. Other wells are nearing the sand.

Heavy crude operators are looking to Blue Ridge as the coming big field, next to Hull, and in preparation for this development many leases have been obtained and locations for wells made. Blue Ridge, like the other proved areas, has been known to contain oil for the last three years, but is only now coming to the front in the matter of production.

Experienced oil men are quietly watching the progress of exploration work that is being conducted in Zapata and Starr counties, near the Rio Grande, about 65 miles southeast of Laredo. It is stated that more than 30 shallow wells are now being pumped there, the product being high-grade lubricating oil, which sells for \$6.50 a barrel. The oil is transported by motortruck to Hebbronville, the nearest railroad point, 40 miles. The wells are only 100 to 200 feet deep, and the average production is about eight barrels a day. The drilling is done with an ordinary water-well rig, without derrick. It is regarded as not improbable that wells of big production may be brought in there by deep drilling.

In the light-crude fields of North Central Texas the famous Breckenridge pool continues to excite the chief interest, due to its unbroken record of producing wells. It is stated that the total daily production of Stephens county, in which Breckenridge is situated, is now approximately 125,000 barrels. Among the companies reporting production in completed wells during the last few days in the different North Central Texas fields are the Roxana Petroleum Co., Oklahoma Petroleum & Gasoline Co., the Texas Company, the Prairie Oil & Gas Co. and the Humble Oil & Refining Co.

To Open Up Farm and Coal Lands.

Henryetta, Okla., November 26—[Special.]—The chief engineer of the Oklahoma-Southeastern Railway has secured offices with the Chamber of Commerce, and has a corps at work making a survey to run this line into Henryetta. This company is chartered for 200 miles out of Bristow, Okla., and is now running four daily trains from Bristow to the new oil town of Slick, 12 miles. From Henryetta the line will run south and east to Shawnee, opening up a virgin agricultural country. Entering Henryetta, it will also traverse one of the greatest coal fields in the Henryetta district, one which has remained undeveloped for lack of transportation facilities. The present plans are to make the headquarters of the road here.



Diversified Resources

Fort Worth's trade territory, as indicated in our coat-of-arms above, derives its prosperity from four great staples:

Cotton, Cattle, Grain and Oil

—a billion dollars' worth per year. \$20,000,000 worth of oil alone being produced every month.

¶ \$10,000,000 worth of building under construction today in Fort Worth.

**The NATIONAL
BANK of COMMERCE**
Capital and Surplus \$1,500,000.00
in Fort Worth

To The Readers of
The Manufacturers Record

November 4th, 1920.

ADDITIONAL TAX BURDENS - ?

Have you overpaid your tax? Have you paid a larger percentage than other corporations in similar business? Have you received an assessment for additional tax for the years 1917, 1918 and 1919? If so, you may be entitled to relief under the remedial provisions of the law and it is unquestionably to your advantage to make all adjustments before the Government discovers errors. It makes your case one hundred (100%) percent stronger.

Have you filed claims for Rebates-Refunds? Are you fully satisfied with the status of said claims? Would not personal supervision and follow up before Department insure prompter settlement?

We maintain a Legal Department in Washington, D. C., and have associated with us Mr. Ellis C. Johnson, twenty-five (25) years, General Counsel, Legal Advisor and Solicitor of the Bureau of Internal Revenue. Mr. Johnson has successfully handled more claims before the Department than any man in the country. Mr. George B. Furman and Mr. Johnson give their attention to the preparing and follow up of all our claims.

As Ex-Government Officials, with years of experience, with ability to see, and capacity to analyze the Tax Laws, Rules and Regulations from the Washington Viewpoint, we offer a most unique service, a service needed by the Taxpayers, to the end that they obtain every deduction permissible under the Law. Allow us to review your Federal Income and Excess Profits Tax Returns.

Hoping that we shall be favored with your valued business, which if entrusted to us shall receive our prompt, careful and most thorough attention, we are,

Yours very truly,
ROBERTSON, FURMAN & MURPHY, INC.

C. W. Robertson
President

Suite 204
Singer Building,
New York, N. Y.

SOUTH AMERICA

Important Offer for Manufacturers in the United States

"INTERNATIONAL MERCANTILE AGENCY"

REPRESENTATIVES FOR AMERICAN MANUFACTURERS

Consignees, Importers and Exporters

PAN-AMERICAN INTERCHANGE AGENTS, EXCHANGE and COMMISSIONS

We solicit from manufacturers in the United States the agency for representation and distribution of their products. We guarantee all commercial transactions, with bankers' letters of credit at six months, discountable in any bank in the United States. We offer to make purchases at wholesale and to finance the complete commercial distribution of goods with our own money. We undertake interchange of products between the two nations, and advance money on consignments. We are exporters of baled cotton, representatives and importers of a general line of manufactures, machinery, and American products. Representation a specialty, including exclusive commercial introduction of goods. We have subagents in the capitals of all the States of Peru.

E. T. BARRETO & COMPANY, LIMA, PERU

Portal de Escribanos, 314 (P. O. Address: Apartado 160)

Head Office: PIURA, PERU

Calle de Lima, 62 (P. O. Address: Casilla de Correos 51)

Cable Address: Barretortiz, Piura

Codes: Lieber's Standard A. B. C., 4th Edition

\$150,000 storm-sewer and \$100,000 sanitary-sewer bonds; 6 per cent, 20-40-yr., \$1000 denomination, dated July 1.

Tex., Fort Worth—Municipal.—City, W. D. Davis, Mayor; sold \$1,890,000 bonds to Keane, Higbie & Co., Detroit, Mich. (Lately noted inviting bids.)

Tex., Gonzales — Road. — Gonzales County Road Dist. No. 6; sold \$54,000 of 5½ per cent semi-annual 13½-year bonds to J. E. Jarratt & Co., San Antonio, Tex. (Supersedes recent item.)

Tex., Hallettsville — Electric.—City; vote Dec. 12 on \$20,000 bonds. Address The Mayor.

Tex., Houston — Street, Sewer, Bridge, School.—City, A. E. Amerman, Mayor; bids after Jan. 1 on \$875,000 bonds. (Lately noted voting.)

Tex., Houston — Drainage. — Harris County Comms.; sold \$60,000 of 6 per cent, \$500 denomination bonds, dated Mar. 15, to Howard Kenyon, Contr., at 90 and accrued interest. (Supersedes recent item.)

Tex., Madisonville—School.—Madison County Common School Dist. No. 21; registered \$1000 of 5-20-yr. bonds, dated Nov. 9.

Tex., Navarro — Levee. — Navarro County Comms., Levee Dist. No. 19; issued \$230,000 of 6 per cent serial bonds.

Tex., Oakville — Road. — Live Oak County

Road Dists.; registered \$60,000 Road Dist. No. 4 and \$60,000 Road Dist. No. 5 of 5½ per cent serial bonds.

Tex., Riverside—School.—State; purchased \$10,000 bonds. Address S. F. Houtchens, Secy. Board Trustees.

Tex., Sherman—Water.—City, W. G. Banks, Clk.; sold \$10,000 of 6 per cent \$500 denomination bonds, dated Dec. 10, to Taylor, Ewart & Co., Chicago, at par and accrued interest. (Lately noted inviting bids.)

Tex., Tyler—Road.—Smith County Comms.; issued \$50,000 of 5½ per cent bonds.

Tex., Tyler — Road. — Smith County, W. R. Castle, Judge; bids until Nov. 26; \$270,000 of 5½ per cent semi-annual \$1000 denomination bonds, dated April 10.

Tex., Waco—Street and Land.—City; voted \$165,000 bonds as follows: \$100,000 street and \$65,000 land. Address The Mayor. (Lately noted to vote.)

Tex., Weatherford—School.—Parker County Common School Dist. No. 77; registered \$1500 of 10-20-yr. bonds, dated Nov. 8.

Va., Fairfax—Road.—Fairfax County Commissioners; voted \$500,000 bonds.

Va., Portsmouth—Drainage.—Norfolk County Comms., Drainage District No. 1; issue \$236,500 of 6 per cent 25-year bonds of Pleasant Grove Magisterial Dist.

Va., Martinsville—School.—Town; vote on \$250,000 of 6 per cent bonds. Address The Mayor.

Va., Richmond — School. — City, Albert H. Hill, Supt. Schools; vote on \$1,500,000 bonds.

Va., Richmond—Road.—State; voted amendment to Constitution providing for \$40,000,000 and \$50,000,000 serial bonds; G. P. Coleman, Commr.

Financial Notes.

Fla., Bartow.—Polk County National Bank of Bartow; increased capital from \$100,000 to \$200,000.

La., Rayville.—Richland State Bank; increased capital to \$100,000.

Tex., Hamilton National Bank; increased capital from \$50,000 to \$100,000.

The First National Bank of St. Louis, Mo., has acquired the stock of the Mortgage Trust Co. and the Mortgage Guarantee Co., both of these companies having been controlled by the same interests. The trust and guarantee companies will become the investment division of the First National Bank. It is announced that present officers will be retained. The First National Bank has a capital and surplus of \$15,000,000 and total resources of \$170,000,000.

We Finance

Electric Power and Light Enterprises with Records
of Established Earnings

We Offer

Bankers and Investment Dealers
Proven Power and Light Securities

Correspondence Solicited

ELECTRIC BOND & SHARE CO.

(Paid-up Capital and Surplus, \$24,000,000)

71 Broadway

New York

BOOST PRODUCTION

Add 20 per cent. to speed by equipping your stenographic department with

REID COPYHOLDERS

A. B. REID & COMPANY

223 Grand Ave., W.

Detroit, Mich.

DELAWARE CORPORATIONS

DIGEST OF LAW

(7th ED.) FREE ON REQUEST

STOCK WITHOUT PAR VALUE, if desired.

The most modern and scientific method of corporate organization
CORPORATIONS ORGANIZED AND REPRESENTED.

22 Years' Experience

Corporation Service Company

Equitable Building, Wilmington, Del.

YOUNG & SELDEN COMPANY

MANUFACTURING

Bank and Commercial Stationers

BALTIMORE, MD.



FIDELITY and BURGLARY INSURANCE

SURETY BONDS

FIDELITY & DEPOSIT COMPANY
OF MARYLAND

BALTIMORE

THOMAS A WHELAN, President

PATENTS TRADE-MARKS AND COPYRIGHTS

Before disclosing an invention the inventor should write for our blank form, "EVIDENCE OF CONCEPTION." This should be signed and witnessed, and if returned to us, together with model or sketch and description of the invention, we will give our opinion as to its patentable nature.

Our Illustrated Guide Book, "HOW TO OBTAIN A PATENT," sent Free on request. Contains full instructions regarding Patents and Trade-marks.

VICTOR J. EVANS & CO., - Patent Attorneys

New York Offices Philadelphia Offices Pittsburgh Offices
R 1003 Woolworth Bldg. 135 S. Broad Street 514 Empire Bldg.

Chicago Offices, 1114 Tacoma Bldg.

Main Offices: 749 9th Street N. W. WASHINGTON, D. C.



Capital and Surplus
\$4,000,000

Total Resources
\$38,000,000

Large enough to handle your biggest problems, but not too large to be interested in your smaller ones.

**MERCHANTS-MECHANICS
FIRST NATIONAL BANK
OF BALTIMORE**

**MARYLAND TRUST COMPANY
BALTIMORE**

Transacts a General Trust and Banking Business

Correspondence and interviews invited

CAPITAL. \$1,000,000

W. L. SLAYTON & CO.

—Dealers in—

City
County
Township

BONDS

Road
School
Drainage

TOLEDO, O.

We invite correspondence with City, County or other officials that have bonds, etc., for sale; also contractors who have taken securities in exchange for work.

New Orleans, La. Tampa, Fla. Chicago, Ill.

ELSTON & COMPANY

71 W. Monroe St.

CHICAGO

COUNTY, CITY, SCHOOL, ROAD
BONDS—WANTED

FOR INFORMATION ABOUT

BIRMINGHAM REAL ESTATE

and INVESTMENT OPENINGS, write

JEMISON

REAL ESTATE & INSURANCE COMPANY
BIRMINGHAM, ALA.

We Finance

**MUNICIPALITIES AND HIGH GRADE
INDUSTRIAL COMPANIES**

Correspondence Invited

Lawrence Chamberlain & Company

115 Broadway

(Incorporated)

New York

BLACK & COMPANY

(WILMER BLACK, C. P. A.)

CERTIFIED PUBLIC ACCOUNTANTS

OFFICES:

Suite 1208 GARRETT BUILDING
6 HAMILTON ROW

BALTIMORE, MD.
HAGERSTOWN, MD.

**LOANS MADE TO
STATES, CITIES, COUNTIES, ETC.**

Also Entire issues of Bonds of
Successful Industrials Purchased

Largest Capital and Surplus of Any Financial
Institution in Maryland or any Southern State

Established 1884

Resources \$21,000,000

**Mercantile Trust and Deposit Co.
OF BALTIMORE**

A. H. S. POST, President. F. G. BOYCE, JR., Vice-President.

THE BANK OF ALABAMA

ENSLEY, ALABAMA

R. A. TERRELL - - - - - President
J. W. MINOR - - - - - Vice-President
FOSTER HAMILTON - - - - - Cashier

We Solicit Your Business

**The National Exchange Bank
OF BALTIMORE, MD.**

Capital, \$1,500,000

Surplus, \$1,000,000

MARINE BANK & TRUST COMPANY

New Orleans, Louisiana

Capital and Surplus - \$2,300,000.00

General Banking - Domestic and Foreign

Correspondence Invited

Delaware Corporations
Forms, Law and Pointers

Estimates of Cost Furnished Without Cost

Delaware Registration Trust Co.

900 MARKET STREET
Wilmington, Del.

J. Ernest Smith, President and General Counsel.
Chas. Warner Smith, Vice-President.
Harry W. Davis, Secretary and Treasurer.

**BONDS PURCHASED
MUNICIPAL AND CORPORATION**

Correspondence invited from officers of
Municipalities and from well-established
industrial corporations contemplating
new financing.

HORNBLOWER & WEEKS

Established 1888

INVESTMENT SECURITIES

42 BROADWAY

NEW YORK

BOSTON

CHICAGO

DETROIT

PROVIDENCE

PORTLAND, ME.

PROPOSALS

BOND ISSUES
BUILDINGS
PAVING
GOOD ROADS

Bids close December 16, 1920.

TREASURY DEPARTMENT. Supervising Architect's Office, Washington, D. C., November 18, 1920. Sealed proposals will be opened in this office at 3 P. M. December 16, 1920, for alterations and repairs to plumbing in the United States Courthouse and Postoffice, Covington, Ky., in accordance with specification and drawings, copies of which may be had at this office or at the office of the Custodian, Covington, Ky., in the discretion of the Supervising Architect, JAMES A. WETMORE, Acting Supervising Architect.

Bids close December 27, 1920.

TREASURY DEPARTMENT. Supervising Architect's Office, Washington, D. C., November 29, 1920. Sealed proposals will be opened in this office at 3 P. M. December 27, 1920, for the installation, complete, of an Electric Freight Elevator in the United States Postoffice at Charlotte, N. C., in accordance with the drawing and specification, copies of which may be had at this office in the discretion of the Supervising Architect, JAS. A. WETMORE, Acting Supervising Architect.

Bids close December 27, 1920.

TREASURY DEPARTMENT. Supervising Architect's Office, Washington, D. C., November 29, 1920. Sealed proposals will be opened in this office at 3 P. M. December 27, 1920, for New Mailing Vestibule, etc., at the United States Postoffice Building at Charlotte, N. C. Drawings and specifications may be obtained from the Custodian of the building or at this office, in the discretion of the Supervising Architect, JAS. A. WETMORE, Acting Supervising Architect.

Bids close December 18, 1920.

PROPOSALS FOR STEEL PLATES, COPPER, SHACKLES, BOLTS, NUTS, RIVETS, TAPS, DOOR LOCKS, PLATE GLASS, GLASS CUTTERS, FIRE BRICK, SOAP AND POLISH, FURNACE CEMENT, GOLD LEAF, SPERM OIL, WOOD ALCOHOL, OXALIC ACID, ALUMINA SULPHATE, CALCIUM CARBIDE, GRAPHITE, BICARBONATE OF SODA, PITCH, TAR, ALUMINUM PAINT, METALLIC BROWN, LOCOMOTIVE BLACK, DROP BLACK, PRUSSIAN BLUE, ENAMEL, PAINT REMOVER, VARNISH, VERMILLION, CHALK LINE, BOND PAPER, BRISTOL BOARD AND PAPER TOWELS. Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 o'clock A. M. December 18, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1424) may be obtained from this office or the offices of the Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La.; and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close December 13, 1920.

PROPOSALS FOR SASH-OPERATING DEVICES, PIPEFITTINGS, RANGE BOILERS, VALVES, BRASS CHAIN, LUMBER, MEMORANDUM BOOKS, AND PAPER. Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 o'clock A. M. December 13, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1422) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 606 Common Street, New Orleans, La.; and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States.—A. L. FLINT, General Purchasing Officer.

Bids close December 22, 1920.

PROPOSALS FOR FURNISHING SOUTHERN Yellow-pine Lumber, Doors, Windows, Hardware, etc. Office Mississippi River Commission 1st and 2d Districts, Custom-house, Memphis, Tenn. Sealed proposals will be received here until 11 A. M. December 22, 1920, and then opened, for furnishing and delivering Southern yellow-pine lumber, doors, windows, hardware, etc. Further information on application.

Bids close December 15, 1920.

PROPOSALS FOR HYDRAULIC TURBINE. U. S. Engineer Office, Florence, Ala. Sealed proposals will be received here until December 15, 1920, and then opened, for furnishing and delivering one (1) Hydraulic Turbine of 1000 horse-power capacity, with governor. Further information on application.

Bids close December 15, 1920.

\$65,000 6% School Bonds

Morehead City, N. C.

The Board of Graded School Trustees of the Morehead City Graded School District of Morehead City, Carteret County, N. C. will receive sealed proposals, addressed to the undersigned, until 12 o'clock M. Wednesday, December 15, 1920, at which time the bids will be read at a public meeting of said Board at the City Hall, Morehead City, N. C., and sale made; denomination one thousand (\$1000) dollars, principal and semi-annual interest payable in New York, in lawful money of the United States; coupon bonds bearing interest at the rate of six (6%) per cent. per annum, and maturing December 15, 1950, being thirty years from the date of issue. The bonds are general obligation of said Graded School District, and an unlimited tax for the payment of the principal and interest has been authorized by law and ordinance. This issue is authorized by special act of the General Assembly of the State of North Carolina, ratified August 24, 1920, known as House Bill 280 and Senate Bill 322, and by the authority of the vote of the qualified voters in said Graded School District at an election held Tuesday, November 2, 1920.

Bids must be enclosed in sealed envelope marked "Proposals for Bonds."

Bidders must deposit with the undersigned before making bids, or present with their bids, certified check, payable to the order of the undersigned, upon an incorporated bank or trust company for two thousand (\$2000) dollars, or the same amount in cash, to secure the said Graded School District against any loss resulting from the failure of the bidder to comply with the terms of his bid. The bonds are expected to be ready for delivery on the date of the sale, but may be delivered in New York on or before January 1, 1921, and must be paid for by that time. The right to reject any and all bids is reserved. This November 12, 1920.

C. S. WALLACE, Chairman.

Bids close December 6, 1920.

\$100,000 6% Road and Bridge Bonds

Dobson, N. C.

On the 6th day of December, 1920, same being the first Monday, at 12 o'clock M., the following county bonds will be offered for sale publicly, to wit: Seventy-five Thousand Dollars (\$75,000) of good roads bonds, bearing 6 per cent. interest, payable semi-annually from the date of issue, in denominations of One Thousand Dollars (\$1000), the time of maturity being determined by the Board of County Commissioners on the day of sale. At the same time Twenty-five Thousand Dollars (\$25,000) of bridge bonds will be sold publicly, bearing 6 per cent. interest, payable semi-annually from date of issue, the maturity of these bonds to be determined by the Board of County Commissioners on the day of the sale.

Sealed bids will be received by Henry Wolfe, Clerk of the Board, at Dobson, N. C., up to the hour of the sale. A certified check, One Thousand Dollars (\$1000), required by each bidder. The right is reserved to reject any or all bids.

By order of the Board of Commissioners. November 1, 1920.

S. F. SHELTON,
Chairman.

Bids close December 7, 1920.

\$65,000 6% County Highway Bonds

Carthage, N. C.

Sealed proposals or bids will be received by the Board of Commissioners of the County of Moore, State of North Carolina, at its office in Carthage, N. C., by mail or otherwise, up to 1 P. M. December 7, 1920,

for purchase of \$65,000 6 per cent. Moore County Highway Bonds (interest payable semi-annually on first day of January and July), bonds to be dated January 1, 1921; \$20,000 payable January 1, 1931; \$20,000 payable January 1, 1941, and \$25,000 payable January 1, 1951.

Bidders may file sealed proposals or bids for blocks of said bonds maturing at different dates or for the entire issue.

Bidders must deposit with bid certified check payable to the County of Moore, or cash, equal to 2 per cent. of the face of bonds bid for to secure county against loss resulting from failure to comply with terms of bid.

Bids will be opened, in public, in office of Board in Carthage, N. C., at 1 P. M. December 7, 1920.

Bids less than par will not be accepted. The board reserves the right to reject all bids.

H. P. McPHERSON,
Chairman of Board.

Bids close December 21, 1920.

\$190,000 Municipal Improvement Bonds

South Jacksonville, Fla.

City Council will open bids at City Hall evening of December 21, 1920.

Bonds to be sold will be denomination of \$1000 each, dated November 1, 1920, and payable February 1, A. D. 1950.

Present bonded indebtedness, \$125,000.

Value of property assessments, real and personal, for year 1920, \$4,607,780.

R. M. ROGERS, City Clerk.

Bids close January 10, 1921.

\$400,000 4½% Dock and Belt Railroad Improvement Bonds

PRINCIPAL AND INTEREST PAYABLE IN GOLD.

Pensacola, Fla.

Sealed bids will be received by the Board of Commissioners of the City of Pensacola, Florida, from December 2, 1920, to 12 o'clock noon of January 10, 1921, for all or any part of the City of Pensacola \$400,000 4½ per cent dock and belt railroad improvement bonds for delivery to purchasers February 1, 1921. Said bonds being thirty-year bonds, dated January 1, 1920. Copy of opinion of John C. Thomson, Attorney, New York, will be furnished successful bidder.

Bids must be on form of proposal furnished by the City of Pensacola.

The right is reserved to reject any or all bids.

For further particulars address the United States Mortgage & Trust Company, 55 Cedar Street, New York, N. Y., or the undersigned.

F. D. SANDERS,
Mayor, City of Pensacola.

Attest:
L. E. HEINBERG,
City Clerk.

Bids close December 14, 1920.

Copper Wires

New Orleans, La.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans at their office, Suite 200, New Orleans Court Building, until 8 P. M. o'clock December 14, and then publicly opened, for the furnishing of rubber-covered, weather-proof and bare copper wires for the Board's coal-handling plant.

A deposit of \$300 cash or certified check is required with proposal.

Successful bidder will be required to sign a notarial contract and furnish bond in amount of \$1200 to guarantee fulfillment of contract.

Payments will be due 30 days after delivery of materials.

The right is reserved to accept any bid in part or to reject any or all bids and to waive formalities.

List of materials can be obtained from the Supervisor of Purchases, Board of Commissioners, Port of New Orleans, No. 1 Canal Street, New Orleans, La.

W. O. HUDSON,
President.

Bids close December 7, 1920.

Macadam Resurfacing

STATE OF MARYLAND.
STATE ROADS COMMISSION.

Baltimore, Md.

Sealed proposals for building the following section of State Highway, as follows:
FREDERICK COUNTY — CONTRACT No. F-41: One section of State Highway from Harmony Grove to Frederick, via cut-off and the Opossumtown Pike, for a distance of 4.42 miles. (Macadam Resurfacing.)

Will be received by the State Roads Commission at its offices, 601 Garrett Building, Baltimore, Maryland, until 12 M. on the 7th day of December, 1920, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of five hundred (\$500) dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

By order of the State Roads Commission this 19th day of November, 1920.

J. N. MACKALL,

Chairman.

L. H. STEUART,

Secretary.

Bids close December 6, 1920.

Previously advertised for December 9,

Road and Bridge Improvements

Titusville, Fla.

Sealed proposals will be received by the Board of County Commissioners of Brevard County, Florida, at Titusville, Fla., at the office of the county clerk, until December 6 at 2 P. M., 1920, for the construction of roads and bridges in Cocoa Beach Special Road and Bridge District, said improvements to consist of clearing, grubbing, grading and paving of about 28 miles of roads and the construction of about 8600 feet of trestle bridge, including one draw span, also the construction of about 90,000 cubic yards of dredge fill.

Plans and specifications may be obtained from the engineer at actual cost of \$8 and are on file at the office of the board and engineer. All bids are upon the unit basis and will be divided into sections in order that contractors may bid upon certain portions of the work; they are to be directed to the Chairman of the Board of County Commissioners, and must be accompanied by a certified check, bidder's bond or cash, payable to the Board of County Commissioners of Brevard County, Florida, in an amount of 5 per cent. of the total amount of the bid, which check or equivalent will be forfeited to the county upon failure of the successful bidder to enter into contract and furnish acceptable bond. Successful bidders will be required to furnish a construction bond of 25 per cent. of the amount of their contract price. The right is reserved by the board to reject any or all bids.

By order of Board of County Commission-

ers of Brevard County, Florida, this 9th day of November, 1920.

S. A. OSTEN,

Chairman Board of County Commissioners.

J. F. MITCHELL,

Clerk Board of County Commissioners.

C. M. ROGERS, Engineer.

Daytona, Fla.

Bids close January 6, 1921.

Previously advertised for January 8.

Miami River Bridge

AT AVENUE G, MIAMI, FLORIDA.

Sealed proposals, to be filed with the city clerk, will be received by the City of Miami, Florida, up to 7:30 P. M. January 6, 1921, for the construction of a bridge over the Miami River at Avenue G. The bridge is a double-leaf steel bascule span with piers and embankment approaches. The clear span is 115 feet; the total length of improvement 495 feet. One 30-foot roadway; two 6-foot walks. Reinforced concrete bascule piers and retaining walls.

Bids upon a lump-sum basis and also upon a cost-plus-a-fee basis will be considered. With each bid there shall be a certified check for at least 10 per cent. of the bid, made payable to the city treasurer; this check will be forfeited as liquidated damages by the bidder if he is awarded the contract but fails promptly to execute contract and bond, or will be returned to him upon such execution. Checks of other bidders will be returned promptly. The contract will be awarded to the lowest competent, responsible bidder, but the city may reject any or all bids, adopt either form of bid and waive informalities.

Plans and specifications may be examined in the offices of Chas. W. Murray, city engineer, Miami, Fla., and of Harrington, Howard & Ash, consulting engineers, at Jacksonville, Fla., and 1912 Baltimore Avenue, Kansas City, Mo. Copies may be secured from the consulting engineers at Kansas City by depositing \$25. Such copies shall be returned and refund of \$20 made.

Bids close December 13, 1920.

Steel Bridges

Sealed proposals addressed to County Judge of Nacogdoches County for the improvement of certain highways in Nacogdoches County will be received at the office of County Judge of Nacogdoches County, Texas, until 10 o'clock A. M. December 13, 1920, and then publicly opened and read.

DESCRIPTION OF WORK TO BE DONE AND APPROXIMATE QUANTITIES CONTAINED IN IMPROVEMENT.

Steel bridges, complete, in place, with the following quantities:

Wet excavation, 1360 cubic yards.

Dry excavation, 136 cubic yards.

Reinforcing steel, 167,141 pounds.

Structural steel, 983,667 pounds.

Concrete A and B, 2930 cubic yards.

Pipe hand rail, 4522 linear feet.

F. B. M. flooring, 68,000 feet.

Detailed plans and specifications of the work may be seen for examination and information may be obtained at the office of Lamar Acker, Engineer, at Nacogdoches, Texas, and at the office of the State Highway Department, State Office Building, Austin, Texas.

A certified check for Ten Thousand Dol-

lars made payable without recourse to the order of J. M. Marshall, County Judge of Nacogdoches County, on local bank must accompany each proposal as a guarantee that the bidder if successful will enter into contract and make bond in accordance with requirements of the specifications. The right is reserved by the party of the first part to reject any and all proposals or to waive all technicalities.

Proposals shall be submitted in sealed envelopes and marked "Bids for the erection of Steel Bridges in Nacogdoches County."

Money on hand in local bank to pay for same on Engineer's estimate and completion of projects.

For further information address

I. D. PARMLEY,

County Clerk, Nacogdoches County,
Nacogdoches, Texas.

Bids close December 10, 1920.

Bridge Construction

Tallahassee, Fla.

Sealed proposals will be received by the State Road Department at Tallahassee, Fla. up to 5 o'clock P. M. on the 10th day of December, 1920, for the construction of a bridge on State Road No. 2, over the Suwannee River, near White Springs, Fla.

The proposed structure consists of a through steel truss, 228 feet C. to C. on, reinforced concrete abutments, with a clear roadway of 20 feet.

The proposed improvement involves approximately:

3,480 lineal feet wood foundation piling.

503 cubic yards Class "A" concrete.

34,500 pounds steel reinforcement.

410,000 pounds structural steel.

15,200 pounds cast-steel plates, rollers, etc.

456 lineal feet hand rail.

Plans and specifications are on file at the office of the State Road Department, Tallahassee, Fla., for examination, and may be obtained upon application to the State Highway Engineer for the sum of \$10. When returned with a bona fide bid, \$5 will be returned to the bidder.

Proposals may be submitted as follows:

(a) On substructure, complete in place.

(b) On steel superstructure, complete in place.

(c) On completed bridge as provided for in the plans and specifications.

The right is reserved to reject any or all bids.

All proposals must be accompanied with a certified check, made payable to Forrest Lake, Chairman State Road Department, in the sum of five (5) per cent. of the proposal, as evidence of good faith and entering into contract by the party to whom the work may be awarded.

Any bidder who shall, after fifteen (15) days' notice being given of the acceptance of his or their proposal or proposals, fail to execute the contract and furnish the required bond shall forfeit his or their claim to the work, and his or their certified check shall be retained and used by the State of Florida as liquidated damages.

STATE ROAD DEPARTMENT.

FORREST LAKE,

Chairman.

CHAS. A. BROWNE,

State Highway Engineer.

November 9, 1920.



CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS, WATER POWERS, MISCELLANEOUS PROPERTIES

BONA-FIDE PURCHASERS in the market for coal lands, leases or going mines in Eastern Kentucky and West Virginia, or for oil and gas leases in either the Eastern or Western Kentucky oil fields within producing area, or production itself, will be given an opportunity to procure same upon dividend-paying basis. Only properties offered that will bear every inspection and at actual market prices—not inflated prices. N. P. Howard, Lexington, Ky.

I MAKE A SPECIALTY of leases, royalties, production, coal and timber lands and fluorspar properties in Kentucky. Have a fine tract of timber, with mills, etc. Also handle leases in Texas and Louisiana. E. D. Watkins, Oil Producer, Irvine, Ky.

WATERPOWER

FOR SALE—The easiest developed and best water in Virginia, on the James River, 54 miles west of Lynchburg, on the C. & O. R. R.; 50 to 100 acres of land at this place go with the water-power, for a manufacturing site. This is a most ideal place for a number of cotton mills; fine climate, good water and cheap living; plenty of native help in this territory — Scotch-Irish and Pennsylvania Dutch ancestry. Can raise \$100,000 stock for a cotton mill, if good mill people will start the mill. Jasper Miller, Springwood, Va.

ZINC PROPERTY

FLUORSPAR AND ZINC properties for sale or lease, including some developed, equipped and producing mines. Also have a few Kentucky oil leases. C. W. Haynes, Marion, Ky.

TALC DEPOSIT

A LARGE DEPOSIT of fine commercial talc on railroad can be obtained on most reasonable terms. S. P. McConnell, Carthage, North Carolina.

CLAY PROPERTIES

LARGE BRICK CLAY PROPERTY. Favorably located directly on railroad and on bricked highway, eight miles west of Newbern, N. C.; adapted for high-grade brick, tile and other clay products. Has been examined and recommended by an eminent engineer as being unusually meritorious. Report will be furnished to interested parties. Owner will accept part payment in securities of properly financed and managed company. Thomas B. Hammer, Owner, Philadelphia, Pa.

SILICA SAND

GLASS SAND FOR SALE.—Unlimited deposit of silica sand suitable for manufacture of glass, etc. Analysis 99% silica. Located 20 miles from Baltimore City on deep water. Mining and shipping facilities most favorable. Will sell or lease on royalty. Apply W. E. Ferguson, 220 St. Paul St., Balto., Md.

FELDSPAR MINE

FOR SALE—A high-grade feldspar mine, good shipping facilities; enough mica and quartz to pay mining expense; also a band of good kaolin in same dike. Entire output contracted for at 100 per cent. net profit aboard cars. Exceptional opportunity. Ill-health, want to go to California, reason for selling. Will sacrifice to quick purchaser. P. O. Box 54, Asheville, N. C.

OIL LANDS AND LEASES

FOR A SAFE INVESTMENT BUY AN OIL LEASE IN GOOD TERRITORY.

We have leases in the Big Bend and Trans-Pecos sections of Southwest Texas, where geologists say the prospects for oil and gas are the best. These leases were selected in the most favorable territory one year ago. Small tracts, \$5 per acre; half sections, \$20 acres, \$2.50 per acre. Write Drawer 10, Irvine, Ky.

COAL AND TIMBER LAND

COAL AND TIMBER LAND in Tennessee, 35,000 acres with three seams, ranging 4 to 12 feet thick. Best coking coal in country; conditions such can be mined by drifting and at less expense than any other section, and located where distribution is unsurpassed. Also 2000 to 3500 feet merchantable saw timber per acre. Land fine for agriculture when cleared. Price in fee, \$20 per acre; titles first-class. Terms can be arranged with responsible parties. This is an exceptional property. W. R. Power, 829 City Bank Building, Mobile, Ala.

TIMBER OPERATION

FOR SALE—Lumber milling proposition, complete equipment, now in operation, Eastern Carolina; 25,000,000 feet timber; plenty more available; big bargain; \$175,000, half cash, balance terms. Address No. 5700, care Manufacturers Record, Balto., Md.

TIMBER

CEDAR POLES.

FOR SALE—Fifty-six Cedar Poles, 30 feet long, 6 inches top. Can be cut and split into fence posts. Absolutely sound and never used. At only \$6 each for the lot f. o. b. cars our plant, East Buffalo, N. Y.

THE LIVE POULTRY TRANSIT CO.
343 South Dearborn St.,
Chicago, Ill.

HAVE FOUR (4) CARLOADS OF

Choice Holly Logs for Sale.
Address The Quaker Oats Co.,
Fosworth, Miss.

TIMBER FOR SALE—19,000 acres, Barnwell County, South Carolina; estimated 55,000,000 feet pine, 20,000,000 feet cypress and ash, 60,000,000 feet hardwoods; on railroad and river. Believed to be finest body of timber this section. J. W. Barnes, Savannah, Ga.

LATH AND TOBACCO STAVE TIMBER.

FOR SALE—10,000 to 15,000 cords standing timber on N. S. R. R., near Newbern, N. C. Will sell by the cord with cash advance. Fine opportunity for laths or tobacco stave factories. Thos. B. Hammer, Philadelphia, Pa.

LUMBER

FOR SALE.

Railroad and structural hardwood lumber and timbers. Correspondence invited.
Sargent Lumber Co., Little Rock, Ark.

WHEN in need of flooring, ceiling, siding, finish, roofers, lath and shingles, write Stephens Lumber Co., Jacksonville, Fla., or 50 E. 42d St., New York.

LUMBER AND BUILDING MATERIALS

WHEN NEEDING lumber and shingles, straight or mixed cars; pine, cypress, hardwood, cedar or redwood, wire us. Extra star cedars, transits \$5.20 delivered. Louisiana Lumber & Shingle Co., Dallas, Texas.

TIMBER LAND

FOR SALE—255 acres river bottom timber land; estimated 12,000 ties; one-fourth mile from town; railroad passes through one corner; fine farming land; no improvements. Terms one-fourth cash, balance one, two and three years, 6 per cent., lien retained. Apply to W. S. Duvall, Paris, Tenn.

RATES AND CONDITIONS

Rate 30 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, oil or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 25c. per line; 300 lines, 25c. per line; 500 lines or more, 25c. per line.

TIMBER LAND

FOR SALE—2500 acres, tract timber land in Western North Carolina, consisting of oak, chestnut, basswood, hickory and other timbers; also about 40,000 cords acid wood bringing \$11 per cord, and 3000 cords tan bark bringing \$22.50 per cord. The land is very fine grass land. Price, \$16 per acre, or timber rights only, \$11 per acre. L. A. Weems, 7922 St. Charles Ave., New Orleans, La.

TIMBER FOR SALE—5000 acres virgin timber; will cut high-grade stock 50,000,000 feet; 50% oak, 45% pine, balance poplar and chestnut; natural logging conditions fine; near through railway to seaboard; A1 proposition for band mill. Price and terms reasonable. Arrange to see it soon. T. M. Fry, Princeton, W. Va.

ONE HUNDRED MILLION FEET

VIRGIN YELLOW PINE

And twenty thousand acres of land for sale; best in Florida; never been offered for sale before; will give one hundred crops turpentine boxes also. There is possibly phosphate on land, although never prospected; however, land is in the phosphate belt. Prices and terms reasonable.

ALSO ANOTHER TRACT

OF FIFTY MILLION FEET

Of fine hardwood timber, largely red gum and oak. Good transportation facilities. Write Timber Owner, Box 201, Jacksonville, Florida.

FARM AND TIMBER LAND

FOR SALE—12,000 acres of timber land in Dawson county, Ga.; estimated to cut 50,000,000 ft. of lumber, largely hardwood. The land is somewhat hilly and watered by several clear, bold streams of water, and is fertile, fine fruit land and grazing land; will grow any crop of that latitude. This is a bargain at \$10 per acre in fee. One-quarter cash, balance easy terms. Have several small improved farms near Rome, Ga., a manufacturing town of 25,000 people. J. W. Mitchell, 208½ Broadway, Rome, Ga.

329 ACRES FOR SALE CHEAP, direct by owner; 50 acres cultivated, balance timber; 6-room dwelling, large barn; 2¼ miles from river landing. P. O. churches, schools, etc. H. R. Dudley, 1809 Willoughby Ave., Norfolk, Va.

FOR SALE—Florida lands and timber; 20,000 and odd acres good virgin pine timber; location, So. Florida, on and near R. R. Rare bargain; only \$9 per acre; fee-simple; also 40,000 and odd acres choice virgin pine timber only \$12.50 per acre fee simple; 2120 acres 2120 acres mostly under good pasture; renee; extra choice for stock purposes; large percentage good quality truck and farm land; some fine citrus fruit and settlement land. Price \$15,500.

1920 acres nearly the above; general purpose land; large barn and wagon shed; several small houses. Price \$12,500.

2120 acres, 3 to 4 miles from R. R.; very best quality of pine land (extra fine timber now being removed); joining and near by are many good groves and farms to prove quality of soil. This is dirt cheap at \$20 per acre wholesale. My price, only \$12.50 per acre. These last three offerings are well located in good portion De Soto County, Fla., with first-class people owning large and small tracts joining and in every direction. 60,000 and some odd acres finest stock-farm proposition in South Florida; solid body; too cheap to quote price only to men meaning business and interested. Some extra choice money-making heavy-bearing groves, well located, with plenty of extra land for farm and stock; also some the best quality of well-drained muck land in the State; only 1¼ miles of R. R.; \$130 per acre. Address L. M. Hughes, Owner's Representative, Box 111, Limestone, Florida.

FARM AND TIMBER LAND

FOR SALE.

5000 acres Georgia timber and grazing land; railroad through property; depot on land; 20,000,000 timber; free and clear perfect title; 75 miles north Jacksonville, Fla.

A. F. WILLIAMS,

Owner,

166 W. Adams St., Chicago, Ill.

SOUTHERN HOMES

COTTAGE on Clearwater Beach, facing Gulf; furnished; all modern conveniences; four rooms and sleeping porch upstairs; living-room, dining-room, kitchen, servants' room and large porch downstairs. Also, large garage. Price \$10,000. J. A. Crenshaw, 311 Seventh Ave., Tampa, Fla.

CATTLE RANCH

FOR SALE—Cattle ranch in Southwestern Texas, containing approximately one hundred and fifty thousand acres of deeded land, well fenced and with good improvements; about one hundred and fifteen thousand acres adjoining under good lease at a very cheap rental; also under good fence; transportation facilities good for moving stock; several thousand head of cattle can be had with the ranch, or ranch will be sold without stock. For price and further particulars write G. E. Moon, Beaumont, Texas, Box 562.

FRUIT, FARM AND TRUCK LANDS

DISTRICT OF COLUMBIA

GENTLEMAN'S COUNTRY ESTATE BARGAIN.

Beautiful colonial center-half type house. First floor—Living-room, music-room, library, dining-room, butler's pantry, kitchen and extra lavatory. Second floor—Five master bedrooms, two tiled baths. Third floor—Three bedrooms and bath. Six open fireplaces; large double porches on two sides; hot-water heat; hardwood floors; gas; electricity; 10 acres; lawn; tennis courts; rose garden; kitchen garden; garage for three cars; chauffeur's quarters; stable; chicken-house; carriage-house; 100 fruit trees; grape arbor; wonderful trees and shrubbery, hedges. Thirty minutes to Treasury by trolley; 20 minutes by automobile over macadam roads.

Liberal terms if desired.
Will consider an exchange.
O. B. ZANTZINGER,
Washington, D. C.

FLORIDA

\$5000.—96 ACRES, 70 in cultivation; new seven-room dwelling, large barn and tenant-houses; fine condition for farming; possession at once. R. D. Smith, Live Oak, Fla.

THE BEST INVESTMENT in the State of Florida or the South; 45,000 acres, at \$3.50 an acre, close to good city and sugar corporation and mills, and soon to have refinery, and, too, it is close to the famous Hastings potato section; has three railroads through this property and close to water transportation, which gives a freight rate second to none; no better labor conditions than in this section; all in all, this is one of the best farm and subdivision propositions to be had for the money. For sale by W. J. Norris, Atlanta Trust Company Bldg., Atlanta, Ga.

7160 A. AGRICULTURAL LAND, 3¼ miles R. R. town near Florida west coast, 15 miles to good Gulf shipping point; under timber and turpentine contract to Dec. 31, 1924; lessee pays all taxes to that date. An exceptional bargain at \$5 per acre. A. M. Ellisworth, 270 Ponce de Leon Ave., Atlanta, Ga.

FOR SALE—75-acre farm, 20 acres of orange grove, 20 acres peach grove, just beginning to bear; orange crop estimated this year at 1800 boxes; eight-room dwelling, four-room tenant-house, necessary out-buildings; situated four miles from small town on main line of Seaboard Railway, with mail deliveries at gate each day. Price \$13,000, including mule, cows, hogs and chickens. If bought at once, buyer will get this year's orange crop. Easy terms. J. D. White, Micanopy, Fla.

FOR SALE—60,000 acres land, well located; rail and water transportation; close to market; good title; productive soil. Price and terms on application. G. E. Gage 439 Williams St., Jacksonville, Florida.